(Avantium N.V., a public company with limited liability (naamloze vennootschap) incorporated under the laws of the Netherlands, with its corporate seat in Amsterdam, the Netherlands)

Initial public offering of up to 8,181,818 ordinary shares and admission to listing and trading of all ordinary shares on Euronext Amsterdam and Euronext Brussels

This prospectus (this **Prospectus**) relates to the initial public offering of ordinary shares of €0.10 nominal value each (the **Offering**) by Avantium N.V. (the **Company** or **Avantium**). The Company is offering up to 8,133,168 newly issued ordinary shares (the **New Offer Shares**). The gross proceeds of the Offering for the Company will amount to approximately €90 million, assuming the issuance of 8,133,168 New Offer Shares at €11.00 per Offer Share (as defined below) (the **Offer Price**) (excluding the Increase Shares and the Over-Allotment Shares (both as defined below). The minimum net proceeds of the Offering for the Company must be at least €65 million (see Chapter 6 "Reasons for the Offering and Use of Proceeds", section "Use of proceeds"). Avantium received irrevocable commitments to subscribe for Offer Shares for an amount of €20 million and firm intentions to subscribe for Offer Shares for an amount of €44 million (in total an aggregate amount of €56 million net). If the net proceeds in the amount of €65 million are not raised, the Offering shall be cancelled. Application has been made to list and admit all Shares (as defined below) on Euronext Amsterdam, a regulated market of Euronext Amsterdam N.V. (**Euronext Amsterdam**) and on Euronext Brussels, a regulated market of Euronext Brussels NV/SA (**Euronext Brussels**, and together with Euronext Amsterdam, **Euronext**) (the **Admission**).

Participants of the Company's option plan are holders of depositary receipts for ordinary shares in the Company, issued by Stichting Administratiekantoor Avantium (the **Avantium Foundation**). The Avantium Foundation is offering 48,650 Shares (the **Management Shares**) on behalf of the Company's CEO, CFO and CTO (the **Managers**), representing 0.6% of the Offer Shares. They will be receiving proceeds through the sale of the Management Shares to repay or compensate for financing and related costs incurred in 2007 in connection with their investment in these Shares.

The term **New Offer Shares** includes, unless the context indicates otherwise, the Increase Shares and the Over-Allotment Shares, as defined below. The term **Offer Shares** includes the New Offer Shares and the Management Shares. The term **Shares** includes the existing ordinary shares, the Offer Shares and the ordinary shares converted pursuant to the convertible loans agreement entered into by the Company in March 2016 (the **CLA**) (as described in Chapter 20 "General Information", section 20.3 "Material contracts").

The Offering consists of: (i) a public offering in the Netherlands and Belgium to institutional and retail investors and (ii) private placements to certain institutional investors in various other jurisdictions. The Offering is being made outside the United States of America (the **United States** or **US**) and the Offer Shares will only be offered and sold in offshore transactions outside the United States in reliance on Regulation S (**Regulation S**) under the US Securities Act of 1933, as amended (the **US Securities Act**). The Offer Shares have not been and will not be registered under the US Securities Act. The Offer Shares are being offered only in those jurisdictions in which, and only to those persons to whom, offers of Offer Shares may lawfully be made.

The price of the Offer Shares (the Offer Price) is expected to be €11.00 per Offer Share

The Offering will take place from 09:00 Central European Time (**CET**) on 6 March 2017 until 17:30 CET on 13 March 2017 (the **Offering Period**), subject to acceleration or extension of the timetable for the Offering, taking into account that the Offering Period shall be at least six business days. The Company may determine, in common agreement with the Joint Global Coordinators, if the Offering is oversubscribed, to increase the total number of New Offer Shares by up to 15%, up to a maximum of 9,353,143 New Offer Shares (the **Increase Option**, and any New Offer Shares offered pursuant to the exercise of the Increase Option, the **Increase Shares**), at any time prior to allocation of the Offer Shares. Any such change will be announced in a press release that will also be posted on the Company's website.

A supplement to this Prospectus will be published in the event the Offer Price is changed. Any increase of the Offer Price on the last day of the Offering Period will result in the Offering Period being extended by at least two business days; any increase of the Offer Price on the day prior to the last day of the Offering Period will result in the Offering Period being extended by at least one business day. Investors who have already agreed to purchase or subscribe for the Offer Shares before the supplement is published shall have the right, exercisable within two business days following the publication of the supplement, to withdraw their acceptances.

The exact number of Offer Shares will be determined by the Company, in common agreement with the Joint Global Coordinators, after the end of the Offering Period after taking into account the conditions described in Chapter 16 "The Offering", section 16.4 "Number of Offer Shares". The exact number of Offer Shares and the maximum number of Over-

Allotment Shares will be stated in a statement that will be published, ultimately on the first trading day following the end of the Offering Period, through a press release that will also be posted on the Company's website (the **Offering Statement**).

The Company has received unconditional and irrevocable commitments to participate in the Offering and subscribe for Offer Shares from certain CLA lenders for an aggregate amount of €20 million (including PMV-TINA Comm. VA for an amount of €10 million and SFPI-FPIM SA/NV for an amount of €5 million). The Company has also received firm intentions to participate in the Offering and to subscribe for Offer Shares from certain other investors for an aggregate amount of €44 million (including: (i) Stichting APG Developed Markets Equity Pool for an amount of €30 million, (ii) RobecoSAM AG and Optiverder B.V. each for an amount of €5 million and (iii) two other investors each for an amount of €2 million). These investors (together: the **Cornerstone Investors**) will be fully allocated for an aggregate amount of €64 million. In addition, each Cornerstone Investor who will subscribe for Offer Shares for at least €5 million will receive one warrant for every four Offer Shares subscribed for in connection with its irrevocable commitment or firm intention, entitling it to acquire one Share per warrant for an exercise price of 125% of the Offer Price (the **Warrants**). The Warrants will mature five years following the Settlement Date and are exercisable after two years following the Settlement Date (see Chapter 16 "The Offering", section 16.6 "Warrants").

Provided that there is sufficient demand, it is intended that at least 10% of the Offer Shares will be allocated to retail investors in the Netherlands and Belgium. The proportion of Offer Shares allocated to retail investors in the Netherlands and Belgium may be increased or reduced if applications received from them exceed or do not reach, respectively, 10% of the Offer Shares. Retail investors in Belgium and the Netherlands will be treated equally in terms of allocation in case of an oversubscription of the Offering.

The Company is expected to grant to the Underwriters (as defined below) an option (the **Over-Allotment Option**), exercisable by ING Bank N.V. as stabilisation agent (the **Stabilisation Agent**), for and on behalf of the Underwriters, within 30 calendar days after the First Trading Day (as defined below), pursuant to which the Stabilisation Agent, for and on behalf of the Underwriters, may require the Company to issue at the Offer Price up to 1,219,975 additional New Offer Shares (or up to 1,402,971 additional New Offer Shares in the event that the Increase Option is exercised in full), comprising up to 15% of the total number of New Offer Shares (the **Over-Allotment Shares**), to cover short positions resulting from any over-allotments made in connection with the Offering or stabilisation transactions, if any. Such transactions shall be carried out in accordance with applicable law. However, there is no assurance that the Stabilisation Agent (nor any of its agents) will undertake stabilisation activities. Such transactions, if commenced may be discontinued at any time. Save as required by law, the Stabilisation Agent does not intend to disclose the extent of any stabilisation under the Offering.

INVESTING IN THE OFFER SHARES INVOLVES RISKS. SEE CHAPTER 4 "RISK FACTORS" BEGINNING ON PAGE 52 OF THIS PROSPECTUS FOR A DESCRIPTION OF CERTAIN RISKS THAT SHOULD BE CAREFULLY CONSIDERED BEFORE INVESTING IN THE OFFER SHARES.

Prior to the Offering, there has been no public market for the Shares. Application has been made to list and admit all of the Shares to trading under the symbol "AVTX" on Euronext. Subject to acceleration or extension of the timetable for the Offering, taking into account that the Offering Period shall be at least six business days, trading on an "as-if-and-when-issued-and/or-delivered" basis in the Shares on Euronext is expected to commence on or about 15 March 2017 (the **First Trading Day**).

Payment (in euro) for, and issue and delivery of, the Offer Shares (**Settlement**) is expected to take place on or about 16 March 2017 (the **Settlement Date**). The closing of the Offering is subject to the satisfaction of a number of conditions (see Chapter 16 "The Offering", section 16.9 "Delivery, clearing and Settlement" and Chapter 17 "Plan of Distribution, section 17.2 "Underwriting Agreement"). If Settlement does not take place on the Settlement Date as planned or at all, the Offering may be withdrawn, in which case all subscriptions for Offer Shares will be disregarded, any allotments made will be deemed not to have been made and any subscription payments made will be returned without interest or other compensation. Any dealings in Offer Shares prior to Settlement are at the sole risk of the parties concerned. The Company, ING Bank N.V., acting as listing and paying agent (the **Listing and Paying Agent**), the Underwriters and Euronext do not accept responsibility or liability towards any person as a result of the withdrawal of the Offering or the (related) annulment of any transactions in Offer Shares on Euronext.

At the date of this Prospectus the Company is still a private limited liability company (*besloten vennootschap met beperkte aansprakelijkheid*) named Avantium Holding B.V. and is expected to be converted into a public company with limited liability (*naamloze vennootschap*) prior to Settlement (the **Conversion**).

ING Bank N.V., acting through its corporate finance division (**ING**), and KBC Securities NV/SA (**KBC Securities**) are acting as joint global coordinators (the **Joint Global Coordinators**) and together with Coöperatieve Rabobank U.A. (**Rabobank**) as joint bookrunners (**Joint Bookrunners**) in the Offering. Oddo et Cie S.C.A. is acting as co-lead manager in the Offering (the **Co-Lead Manager**, and together with the Joint Bookrunners, the **Underwriters**). Kepler Cheuvreux S.A. is acting as the distribution partner on behalf of Rabobank. Oaklins Equity ECM Advisory B.V. (**Oaklins**) is acting as the financial advisor of the Company for the Offering.

The Offer Shares are expected to be delivered on 16 March 2017 in book-entry form through the facilities of Nederlands Centraal Instituut voor Giraal Effectenverkeer B.V. (**Euroclear Nederland**) in accordance with Euroclear Nederland's normal procedures applicable to equity securities and against payment in full for the Offer Shares in immediately available funds.

This Prospectus constitutes a prospectus for the purposes of Article 3 of Directive 2003/71/EC of the European Parliament and of the Council, and amendments thereto (including those resulting from Directive 2010/73/EU) (the **Prospectus Directive**) and has been prepared in accordance with chapter 5.1 of the Dutch Financial Markets Supervision Act (*Wet op het financieel toezicht*; the **FSA**) and the rules promulgated thereunder. This Prospectus has been approved by and filed with the Netherlands Authority for the Financial Markets (*Stichting Autoriteit Financiële Markten*, the **AFM**) and has been notified to the Belgian Financial Services and Markets Authority (the **FSMA**) for passporting in accordance with article 18 of the Prospectus Directive.

This Prospectus is dated 3 March 2017

Joint Global Coordinators

ING **KBC Securities**

Joint Bookrunners

ING **KBC Securities** **Rabobank**

Co-Lead Manager

Oddo et Cie S.C.A.

Distribution partner on behalf of Rabobank

Kepler Cheuvreux S.A.

Financial advisor

Oaklins

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1 SUMMARY

Summaries are made up of disclosure requirements known as 'Elements'. These Elements are numbered in Sections A – E (A.1 – E.7). This summary contains all the Elements required to be included in a summary for this type of security and issuer. Because some Elements are not required to be addressed, there may be gaps in the numbering sequence of the Elements. Even though an Element may be required to be inserted in the summary because of the type of securities and issuer, it is possible that no relevant information can be given regarding the Element. In this case a short description of the Element is included in the summary together with an indication that such Element is 'not applicable'.

Section A – Introduction and warnings		
A.1	Introduction and warnings	This summary should be read as an introduction to this prospectus (this **Prospectus**) relating to the initial public offering of ordinary shares of €0,10 nominal value each (the **Offering**) by Avantium N.V. (the **Company** or **Avantium**). The Company is offering up to 10,756,114 newly issued Shares (the **New Offer Shares**, which include, unless the context indicates otherwise, the Increase Shares and the Over-Allotment Shares, both as defined below). Stichting Administratiekantoor Avantium (the **Avantium Foundation**) is offering Shares (the **Management Shares**, and together with the New Offer Shares, the **Offer Shares**), on behalf of the Company's CEO, CFO and CTO (the **Managers**). Application has been made to list and admit all issued ordinary shares of the Company (the **Shares**) on Euronext Amsterdam, a regulated market of Euronext Amsterdam N.V. (**Euronext Amsterdam**) and on Euronext Brussels, a regulated market of Euronext Brussels NV/SA (**Euronext Brussels**, and together with Euronext Amsterdam, **Euronext**) (the **Admission**). Any decision to invest in the Offer Shares should be based on a consideration of this Prospectus as a whole by the investor. Where a claim relating to the information contained in this Prospectus is brought before a court, the plaintiff investor might, under the national legislation of the Member States of the Economic European Area (**Member States**), have to bear the costs of translating this Prospectus before the legal proceedings are initiated. Civil liability attaches only to those persons who have tabled the summary including any translation thereof, but only if the summary is misleading, inaccurate or inconsistent when read together with the other parts of this Prospectus, or it does not provide, when read together with the other parts of this Prospectus, key information in order to aid investors when considering whether to invest in the Offer Shares.
A.2	Consent, indication, conditions and notice	Not applicable; there will be no subsequent public resale or final placement of the Offer Shares by financial intermediaries.
Section B – The issuer		
B.1	Legal and commercial name of the Company	Avantium N.V. (which at the date of this Prospectus is still a private company with limited liability (*besloten vennootschap met beperkte aansprakelijkheid*) named Avantium Holding B.V., expected to be converted into a public company with limited liability (*naamloze vennootschap*) prior to Settlement (as defined below)) and the legal and commercial name of the Company will then become Avantium N.V.
B.2	Domicile, legal form, legislation and country of incorporation	The Company is a private company with limited liability (*besloten vennootschap met beperkte aansprakelijkheid*) incorporated under the laws of and domiciled in the Netherlands. It is expected that prior to Settlement (as defined below), the Company will be converted to a public company with limited liability (*naamloze vennootschap*) (the **Conversion**). The Company has its corporate seat in Amsterdam, the Netherlands.
B.3	Key factors relating to the nature of the Group's operations and its principal activities	The Company, including its subsidiaries (the **Group**), is a leading chemical technology company in developing and commercialising innovative renewable chemistry solutions as sustainable alternatives to fossil-based chemicals and materials. Avantium aims to develop ground-breaking proprietary chemical technologies and production processes to convert biobased feedstock into high-performing, cost competitive and sustainable products, together with its partners around the world. Avantium also provides advanced catalysis R&D services and systems to renowned chemical, refinery and energy companies. The Joint Venture (as defined below) with BASF Nederland B.V. (**BASF**) will not be consolidated by the Company and will therefore not be part of the Group. The Group's business comprises (i) the "YXY Technology", which has been contributed in the

		Joint Venture (as defined below), (ii) “Renewable Chemistries” and (iii) “Catalysis”. During the period 2013-2015, the YXY Technology business recognised €2.9 million of revenues. The development programs for the Renewable Chemistries business did not generate revenues in 2013-2015. Over the period 2013-2015, Avantium generated €31 million of revenues in the Catalysis business. On 30 November 2016, Avantium established a joint venture with BASF, Synvina C.V., in which it has a non-controlling interest of 49%, to commercialise the YXY Technology (the **Joint Venture**), to which Avantium contributed the YXY Technology, the pilot plant in Geleen that has been operational since 2011 (the **Pilot Plant**), the related patents and knowhow and employees. The Joint Venture intends to build and operate the first commercial scale plant for the production of FDCA (the **Reference Plant**). Construction of the Reference Plant is expected to start by the end of 2018, with sales of FDCA and PEF expected to commence in 2021. The Joint Venture intends to subsequently license the YXY Technology to BASF and others to enable global industrial scale production of FDCA and PEF as from 2021. FDCA is a building block that can be used to produce polyesters, such as PEF, a 100% biobased polymer which can be used for packaging of soft drinks, water, alcoholic beverages, fruit juices, food and non-food products and film and fibre applications. The YXY Technology is the furthest advanced technology developed by the Renewable Chemistries business. Two other projects have reached or are entering pilot plant stage: Project Zambezi and Project Mekong. Project Zambezi aims for a cost-effective process for the production of high-purity glucose from non-food biomass that can be converted into bio chemicals such as FDCA, Lactic acid and antibiotics. Project Mekong is a one-step process for the production of MEG, from glucose. Today’s market for MEG is predominantly fossil-based and represents an annual turnover of over US$20 billion. Biobased MEG is chemically identical to fossil-based MEG. Avantium intends to start the construction of dedicated pilot plants for these projects in the next two years. Project Volta is in lab stage and comprises the direct use of electricity in chemical processes including the conversion of CO_2 to chemical building blocks. Six additional Renewable Chemistries projects are currently under development, of which two are at concept stage and four are at lab stage. For over 15 years, Catalysis has been providing advanced catalysis R&D services and systems to companies in the chemical, refinery and energy sector. The Group has developed a strong, international customer base including several industry leaders.
B.4a	Most significant recent trends affecting the Group and industries in which it operates	Based on sources listed in Chapter 5 “Important Information”, section 5.6 “Market and industry information”, the major trends influencing the relevant markets include: Chemistry: • petroleum is a finite, non-renewable resource that is in growing demand • need to limit greenhouse gas emissions and environmental footprint • increasing government regulation • increasing demand for renewable, sustainable products and a circular economy • petroleum price volatility Plastics: • sustainable sourcing of products and green label products • prepared fresh food and food waste • brand building through packaging • portioning, recycling, clean labelling, convenience and lightweight Biobased feedstock: • expiration of the European sucrose and fructose quota system • concerns regarding non-food biomass applications • declining demand for High Fructose Corn Syrup due to increasing health concerns of excessive sugar consumption Catalyst: • valorisation of petroleum and gas at the source • feedstock diversification • more stringent legislation
B.5	Description of the Group and the Company’s position therein	The Company is the parent company of a group of operating companies. The principal assets of the Company include the 100% equity interests it directly or indirectly holds in its operating subsidiaries and the 49% equity interest it holds in the Joint Venture.

B.6	Major shareholders	The following table sets forth information with respect to the beneficial ownership of each holder of Shares (a **Shareholder**), or group of affiliated Shareholders, who currently own 3% or more of the Company's issued and outstanding share capital.

Shareholder	**Amount of share capital owned**	
	Number of Shares	**Percentage of share capital and voting rights** [3]
FCPR Sofinnova Capital VI	26,218,429	19.9%
Capricorn Cleantech Fund N.V.	23,214,852	17.6%
ING Corporate Investments Participaties B.V.	18,182,700	13.8%
Coöperatieve Aescap Venture I U.A.	16,863,952	12.8%
Rise Merit Limited [1]	10,202,000	7.7%
Navitas B.V.	8,694,267	6.6%
FCPR Aster II	7,282,897	5.5%
Timber Invest 1 Coöperatief U.A.	7,282,897	5.5%
European Refreshments [2]	5,101,000	3.9%

(1) Rise Merit Limited is indirectly controlled by Swire Pacific Ltd.
(2) European Refreshments is indirectly controlled by The Coca-Cola Company.
(3) The remaining Shareholders, including the Avantium Foundation, hold an aggregate amount of 8,823,505 Shares, representing 6.7% of the share capital and voting rights.

The first column of the table below presents information about the ownership of the Shares by each Shareholder who owns 3% or more of the Company's issued and outstanding share capital at Settlement, following a capital restructuring (the **Capital Restructuring**) comprising an amendment to the Company's articles of association providing for a reverse share split and consequently an increase of the nominal value of the Shares from €0.01 to €0.10. The second and third column of the table below present information about the ownership of the Shares by each Shareholder who owns 3% or more of the Company's issued and outstanding share capital immediately after Settlement, taking into account (i) the conversion of the convertible loans issued by the Company in March 2016 to PMV-TINA Comm. VA (**PMV**), SFPI-FPIM SA/NV (**FPIM**) and to certain of its existing Shareholders, including FCPR Sofinnova Capital VI (**Sofinnova**), Capricorn Cleantech Fund N.V. (indirect) (**Capricorn**), ING Corporate Investments Participaties B.V. (**ING Participaties**), Navitas B.V. (**Navitas**), FCPR Aster II (**Aster II**) and Timber Invest 1 Coöperatief U.A. (**Timber Invest 1**) (together, the **CLA Lenders**) into Shares at a conversion price of 75% of the Offer Price (the **Convertible Loans**) (reference is made to Chapter 10 "Operating and Financial Review", section 10.8 "Liquidity and capital resources", under "Convertible loans agreement") and (ii) assuming the issuance of 8,133,168 New Offer Shares.

Shareholder	**Shares owned at Settlement, following the Capital Restructuring**		**Shares owned immediately after Settlement, without exercise of the Increase Option and the Over-Allotment Option**		**Shares owned immediately after Settlement, with full exercise of the Increase Option and the Over-Allotment Option**	
	Amount	%	Amount	%	Amount	%
FCPR Sofinnova Capital VI	2,621,842	19.9%	2,929,088	12.2%	2,929,088	11.0%
Stichting APG Developed Markets Equity Pool	-	0.0%	2,727,272	11.4%	2,727,272	10.2%

Capricorn Cleantech Fund N.V.	2,321,485	17.6%	2,469,127	10.3%	2,469,127	9.3%
PMV-TINA Comm. VA	-	0.0%	2,261,414	9.4%	2,261,414	8.5%
ING Corporate Investments Participaties B.V.	1,818,270	13.8%	2,012,258	8.4%	2,012,258	7.6%
Coöperatieve Aescap Venture I U.A.	1,686,395	12.8%	1,686,395	7.0%	1,686,395	6.3%
SFPI-FPIM SA/NV	-	0.0%	1,130,909	4.7%	1,130,909	4.2%
Rise Merit Limited	1,020,200	7.7%	1,020,200	4.2%	1,020,200	3.8%
Navitas B.V.	869,426	6.6%	968,500	4.0%	968,500	3.6%
FCPR Aster II	728,289	5.5%	814,140	3.4%	814,140	3.1%
Timber Invest 1 Coöperatief U.A.	728,289	5.5%	814,113	3.4%	814,113	3.1%
European Refreshments	510,100	3.9%	510,100	2.1%	510,100	1.9%
New (public) investors	n/a	n/a	3,633,182	15.1%	6,256,128	23.5%

All Shareholders have the same voting rights.

B.7 Selected historical key financial information

The selected historical financial information of the Group shown in the tables below should be read in conjunction with the information contained in Chapter 5 "Important Information", section 5.4 "Presentation of financial and other information", Chapter 8 "Capitalisation and Indebtedness", Chapter 9 "Operating and Financial Review", and the consolidated financial statements, including the notes thereto, contained in Chapter 22 "Index to the Financial Statements" (the **Financial Information**).

The financial information for the fiscal year ended 31 December 2014 (**FY 2014**) is (i) derived from the comparative information as included in the audited consolidated financial statements for the fiscal year ended 31 December 2015 (**FY 2015**), which is different from the FY 2014 audited financial information due to the YXY Technology business which became a discontinued operation in 2015 and (ii), for comparative purposes, derived from the financial information for FY 2014 as included in the FY 2014 audited consolidated financial statements, which presents the YXY Technology business as continuing operations and the Pharma business as discontinued operations. The financial information for the fiscal years ended 31 December 2013 (**FY 2013**) is derived from the FY 2014 audited consolidated financial statements and presents the YXY Technology business as continued operations and Pharma business as discontinued operations. The financial information for the nine-month period ended 30 September 2016 presents the information for the YXY Technology business as discontinued operations. The comparative figures for the nine-month period ended 30 September 2015 presents the information for both the YXY Technology business and Pharma business as discontinued operations.

For further information, see Chapter 5 "Important Information", section 5.4 "Presentation of financial and other information".

Selected consolidated income statement data

in Euro x 1,000	**Q3 YTD 2016 (*1) Unaudited**	**Q3 YTD 2015 (*2) Unaudited**	**FY 2015 (*3)**	**FY 2014 (*4)**	**FY 2014 (*5)**	**FY 2013 (*6)**
Continuing operations						
Revenues	6,148	7,008	10,266	9,628	10,306	13,070
Expenses (*7)						
Direct selling expenses	(1,088)	(858)	(1,767)	(2,276)		
Employee benefit expenses	(4,922)	(5,661)	(6,841)	(6,108)		
Depreciation, amortization and impairment charge	(577)	(447)	(621)	(569)		
Office and housing expenses	(1,458)	(1,232)	(1,846)	(1,356)		
Patent, license, legal and advisory expenses	(1,732)	(622)	(1,002)	(1,009)		
Laboratory expenses	(816)	(784)	(1,009)	(1,197)		
Marketing and representation expenses	(498)	(425)	(559)	(827)		
Other operating expenses	(320)	(35)	(94)	(411)		
Cost of sales					(9,687)	(8,958)
Selling and marketing costs					(2,156)	(2,030)
Research and development costs					(9,744)	(8,807)
General and administrative costs					(2,938)	(3,548)
Operating loss	**(5,263)**	**(3,056)**	**(3,473)**	**(4,126)**	**(14,221)**	**(10,273)**
Finance income	-	79	124	268	268	202
Finance costs	(1,433)	(209)	(1)	(598)	(845)	(981)
Finance costs - net	**(1,433)**	**(130)**	**123**	**(330)**	**(577)**	**(779)**
Loss before income tax	**(6,696)**	**(3,185)**	**(3,350)**	**(4,456)**	**(14,798)**	**(11,053)**
Income tax expense	-	-	-	-		
Loss for the year from continuing operations	**(6,696)**	**(3,185)**	**(3,350)**	**(4,456)**	**(14,798)**	**(11,053)**
Loss for the year from discontinued operations	**(5,352)**	**(7,022)**	**(9,828)**	**(9,899)**	**442**	**(73)**
Loss for the period	**(12,048)**	**(10,208)**	**(13,178)**	**(14,356)**	**(14,356)**	**(11,125)**
Total comprehensive income for the year	**(12,048)**	**(10,208)**	**(13,178)**	**(14,356)**	**(14,356)**	**(11,125)**
Loss attributable to:						
Owners of the parent	(12,048)	(10,208)	(13,178)	(14,798)	(14,798)	(11,053)
Non-controlling interests	-	-	-	442	442	(73)
	(12,048)	**(10,208)**	**(13,178)**	**(14,356)**	**(14,356)**	**(11,125)**
Total comprehensive income attributable to:						
Owners of the parent	(12,048)	(10,208)	(13,178)	(14,798)	(14,798)	(11,053)
Non-controlling interests	-	-	-	442	442	(73)
	(12,048)	**(10,208)**	**(13,178)**	**(14,356)**	**(14,356)**	**(11,125)**

(1) Figures in this column are unaudited and derived from the 9M 2016 interim consolidated condensed financial statements. The YXY Technology business is reported within discontinued operations.

(2) Figures in this column are unaudited and are derived from the comparative figures in the 9M 2016 interim consolidated condensed financial statements. The YXY Technology business and result of the sale of the Pharma business is reported within discontinued operations.

(3) Figures in this column are derived from the FY 2015 audited financial statements. The YXY Technology business and result of the sale of the Pharma business is reported within discontinued operations.

(4) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements. The YXY Technology business and Pharma business are reported within discontinued operations.

(5) Figures in this column are derived from the FY 2014 audited financial statements. The YXY Technology business is reported within continuing operations and Pharma business is reported within discontinued operations.

(6) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements. The YXY Technology business is reported within continuing operations and the Pharma business is reported within discontinued operations.

(7) The Group has changed the expense categories in the reported consolidated statements of comprehensive income in the 2015 financial statements to better reflect the actual expenses incurred and to ensure consistency between internal and external reporting.

Selected consolidated statement of financial position data

in Euro x 1,000	Q3 2016 (*1) Unaudited	FY 2015 (*2)	FY 2014 (*3)	FY 2013 (*4)
Assets				
Non-current assets				
Property, plant and equipment	3,767	4,017	9,180	9,606
Intangible assets	325	359	228	292
Total non-current assets	**4,092**	**4,376**	**9,408**	**9,898**
Current assets				
Inventories	985	1,045	896	1,309
Trade and other receivables	6,248	5,086	5,505	4,917
Cash and cash equivalents	13,852	6,981	19,140	5,425
Total current assets	**21,085**	**13,112**	**25,541**	**11,652**
Assets held for sale	7,943	5,424	419	-
Total assets	**33,120**	**22,913**	**35,369**	**21,550**
Liabilities				
Non-current liabilities				
Borrowings	3,758	3,600	3,865	5,651
Provisions for other liabilities and charges	-	-	266	256
Total non-current liabilities	**3,758**	**3,600**	**4,132**	**5,907**
Current liabilities				
Borrowings	22,409	400	2,033	10,674
Trade and other payables	8,338	6,196	7,472	7,997
Provisions for other liabilities and charges	175	168	264	193
Total current liabilities	**30,923**	**6,764**	**9,769**	**18,864**
Liabilities related to assets held for sale	-	3,190	(62)	-
Total liabilities	**34,681**	**13,555**	**13,838**	**24,771**
Equity				
Equity attributable to owners of the parent				
Ordinary shares	1,319	1,319	1,319	927
Share premium	81,272	81,272	81,272	43,491
Other reserves	6,070	5,266	5,207	4,272
Retained earnings	(90,223)	(78,499)	(66,784)	(51,986)
Total equity attributable to the owners of the parent	(1,562)	9,358	21,014	(3,296)
Non-controlling interest	-	-	517	75
Total equity	**(1,562)**	**9,358**	**21,531**	**(3,221)**
Total equity and liabilities	**33,120**	**22,913**	**35,369**	**21,550**

(1) Figures in this column are unaudited and derived from the 9M 2016 interim consolidated condensed financial statements. The assets and liabilities of the YXY Technology business are reported as held for sale.

(2) Figures in this column are derived from the FY 2015 audited financial statements. The assets and liabilities of the YXY Technology business are reported as held for sale. The Pharma business was effectively sold per 31 December 2014 and subsequently excluded from the Group's figures.

(3) Figures in this column are derived from the FY 2014 audited financial statements. The assets and liabilities of the Pharma business are reported as held for sale.

(4) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements and are similar to the comparative FY 2014 figures included in the FY 2014 audited financial statements.

Selected consolidated cash flow data

in Euro x 1,000	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	FY 2015 (*3)	FY 2014 (*4)	FY 2014 (*5)	FY 2013 (*6)
Cash flows from continuing operations						
Cash flows from operating activities						
Loss for the year from continuing operations	(6,696)	(3,185)	(3,350)	(4,456)	(14,798)	(11,053)
Adjustments for:						
- Depreciation	487	406	568	500	2,099	1,951
- Amortization	90	41	53	69	88	151
- Impairment	-	-	-	-	-	-
- Share-based payment	1,128	586	1,005	935	935	1,192
- Finance costs - net	1,433	130	(123)	330	577	778
Changes in working capital (excluding exchange differences on consolidation):						
- (Increase) / decrease in inventories	60	(283)	(255)	136	31	(305)
- (Increase) / decrease in trade and other receiv	(1,162)	2,711	(465)	(828)	(970)	(708)
- Increase / (decrease) in trade and other payal	2,142	(3,359)	590	(1,975)	(457)	128
- Increase / (decrease) in provisions	7	(372)	(362)	97	97	102
	(2,512)	(3,325)	(2,337)	(5,191)	(12,398)	(7,764)
Interest (paid)	(2)	(9)	(60)	(159)	(159)	(115)
Net cash used in operating activities	(2,514)	(3,334)	(2,397)	(5,350)	(12,557)	(7,879)
Cash flows from investing activities						
Purchases of property, plant and equipment (PPE)	(244)	(1,625)	(2,126)	(1,635)	(1,635)	(1,960)
Purchases of intangible assets	(56)	(31)	(191)	(185)	(185)	(26)
Net cash used in investing activities	(300)	(1,656)	(2,317)	(1,820)	(1,820)	(1,986)
Cash flow from financing activities						
Proceeds from issuance of ordinary shares	-	-	-	27,035	27,035	-
Interest received	-	44	124	268	268	203
Innovation loan	-	-	224	-	-	1,222
Convertible bond	20,000	-	-	-	-	10,000
Repayments of borrowings	-	-	(5)	(5)	(5)	(5)
Net cash generated from financing activities	20,000	44	343	27,298	27,298	11,421
Cash flows from discontinued operations						
Net cash from/ (used in) operating activities	(7,578)	(2,403)	(3,847)	(6,461)	745	(37)
Net cash from/ (used in) investing activities	(2,738)	-	-	-	-	-
Net cash from/ (used in) financing activities	-	(4,000)	(4,000)	21	21	-
Change in cash from discontinued operations	**(10,316)**	**(6,403)**	**(7,847)**	**(6,440)**	**767**	**(37)**
Net increase / (decrease) in cash, cash equivalents	**17,186**	**(4,946)**	**(4,371)**	**20,128**	**12,921**	**1,556**
Cash and cash equivalents at beginning of the year	6,981	19,140	19,140	5,425	5,425	3,904
Effect of exchange rate changes	(0)	35	59	26	26	2
Cash and cash equivalents from continuing operations at end of financial year	**24,168**	**14,230**	**14,828**	**25,580**	**18,373**	**5,462**
Cash and cash equivalents at end of financial year	**13,852**	**7,827**	**6,981**	**19,140**	**19,140**	**5,425**

(1) Figures in this column are unaudited and derived from the 9M 2016 interim consolidated condensed financial statements. The YXY Technology business is reported within discontinued operations.
(2) Figures in this column are unaudited and are derived from the comparative figures in the 9M 2016 interim consolidated condensed financial statements. The YXY Technology business and result of the sale of the Pharma business is reported within discontinued operations.
(3) Figures in this column are derived from the FY 2015 audited financial statements. The YXY Technology business and result of the sale of the Pharma business is reported within discontinued operations.
(4) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements. The YXY Technology business and Pharma business are reported within discontinued operations.
(5) Figures in this column are derived from the FY 2014 audited financial statements. The YXY Technology business is reported within continuing operations and Pharma business is reported within discontinued operations.
(6) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements. The YXY Technology business is reported within continuing operations and the Pharma business is reported within discontinued operations.

B.8	Selected key pro forma financial information	On 30 November 2016, Avantium established the Joint Venture (with economic effect as of 1 July 2016), in which it has a non-controlling interest of 49%, to which Avantium contributed the YXY Technology, the Pilot Plant, and the related patents and knowhow. *For illustration purposes[1], had the transaction been undertaken at the commencement of the nine-month period ended 30 September 2016 this would have caused the following unaudited*

[1] This unaudited pro forma data has been prepared for illustrative purposes only and, because of its nature, addresses a hypothetical situation and does not represent the actual financial position of the Group. It builds on the assumption that the Joint Venture would have been in place from 1 January 2016. Neither the assumptions nor the resulting pro forma financial information have been audited or reviewed in accordance with any generally accepted auditing standards.

		pro forma changes to the income statement and consolidated statement of financial position data on 1 January 2016: - a gain of €48.8 million (net of tax, however, the Company expects to have sufficient carry-forward fiscal losses) would have been realised after receiving a participation in the Joint Venture with a value of €55.0 million minus €6.2 million book value of assets transferred to the Joint Venture. The 49% participation in the Joint Venture is valued at €55.0 million reflecting the BASF contribution of €57.2 million to the Joint Venture in accordance with its interest of 51% at 30 November 2016 (the date of incorporation of the Joint Venture); - at 30 November 2016 (the date of incorporation of the Joint Venture), there would not be a receivable which has been estimated at €5.8 million from the Joint Venture in relation to expenses and capex for the period July 2016 – November 2016. The estimated amount of €5.8 million is based on actual costs made by the YXY Technology and the final amount will be established following discussions with the Joint Venture and finalisation of the audited consolidated financial statements of the Group as at and for the fiscal year ended 31 December 2016; - an estimated cash compensation would have been received from the Joint Venture for allocated overhead expenses of €1.2 million; and - the €5.4 million loss for the period from discontinued operations would not be recorded in the Group's condensed consolidated financial statement of comprehensive income. Instead, there would be an assumed loss from the Joint Venture participation of an estimated €3.2 million, representing 49% of the operating loss of €6.6 million (€5.4 million as loss for the period from discontinued operations plus the above mentioned €1.2 million as overhead expenses charged by the Group) and a subsequent decrease of the value of the participation in the Joint Venture with the assumed loss of €3.2 million. Going forward, the valuation of the participation in the Joint Venture, in particular the IP relating to the YXY Technology, are to a significant degree dependent on the Joint Venture's estimates of future cash generation and the weighted average cost of capital. The Group now estimates a ten year depreciation of the Reference Plant in accordance with IFRS, tangible and intangible assets are tested for impairment annually or upon the occurrence of a triggering event. An impairment loss will be recognised in the Joint Venture's income statement when the carrying amount of the asset is greater than recoverable amount. Any impairment made by the Joint Venture may have an impact on the Group's results of operations. The performance of the Joint Venture is also impacted by similar international, regional and local conditions, such as macroeconomics and government regulations, as the Group.
B.9	Profit forecast	Not applicable; the Company has not issued a profit forecast.
B.10	Historical audit report qualifications	Not applicable; there are no qualifications.
B.11	Explanation if insufficient working capital	The Company is of the opinion that the Group has sufficient working capital for its present requirements, that is, for at least the next twelve months from the date of the publication of this Prospectus.
Section C – Securities		
C.1	Type and class, security identification number	The Shares are ordinary shares in the share capital of the Company. Application has been made to list all Shares under the symbol "AVTX" on Euronext Amsterdam and Euronext Brussels under ISIN code: NL0012047823.
C.2	Currency of the Offer Shares	The Shares are denominated in and will trade in euro.
C.3	Number of Shares and nominal value	At the date of this Prospectus the issued and outstanding capital of the Company will amount to €1,318,664.99 consisting of a single class of shares, with a nominal value of €0.01 per share. All issued shares are fully paid-up and are subject to, and have been created under, the laws of the Netherlands. The nominal value of the shares in the capital of the Company will be increased to €0.10 as part of the Capital Restructuring.
C.4	Rights attached to the Offer Shares	References to the **Articles of Association** hereafter will be to the Company's articles of association following their amendment prior to Settlement. Each Offer Share confers the right to cast one vote in the general meeting of shareholders of

		the Company (the **General Meeting**). There are no voting restrictions, other than that the Company has no voting rights on the Shares that it holds in treasury. The Offer Shares will be eligible for any dividends which the Company may declare on Shares after the Settlement Date. Holders of Shares have a pre-emptive right in the event of an issue of Shares. Holders of Shares do not have pre-emptive rights in respect of Shares issued against contribution in kind or Shares issued to employees of the Group or of a Group company. These pre-emptive rights also apply in case of granting of rights to subscribe for Shares. Subject to the approval of the supervisory board of the Company (the **Supervisory Board**), the management board of the Company (the **Management Board**) is authorised to limit or exclude the pre-emptive rights to which Shareholders are entitled if and to the extent that the General Meeting has authorised the Management Board for this purpose, and only if the Management Board at that time is also authorised to issue Shares. Such authorisation can only be made for a maximum period of five years. The General Meeting has designated the Management Board, for a period that ends 18 months following the Conversion, as the corporate body authorised to issue Shares or grant rights to subscribe for Shares and to restrict or exclude pre-emptive rights. Pursuant to this designation, the Management Board may resolve to issue Shares or grant rights to subscribe for Shares (i) up to a maximum of 10% of the total number of Shares issued and outstanding on the Settlement Date for unspecified purposes plus (ii) an additional 10% of the total number of Shares issued and outstanding on the Settlement Date in connection with or on the occasion of mergers and acquisitions and strategic alliances and (iii) up to a maximum of 10% in connection with an incentive plan, stock ownership plan and/or any comparable plan, subject to approval of the Supervisory Board. Such authorisation may from time to time be extended by a resolution of the General Meeting for a period not exceeding five years.
C.5	Restrictions on transferability of the Offer Shares	There are no restrictions on the free transferability of the Offer Shares under the Articles of Association. However, the offer of Offer Shares to persons located or resident in, or who are citizens of, or who have a registered address in countries other than the Netherlands or Belgium, and the transfer of Offer Shares into jurisdictions other than the Netherlands or Belgium may be subject to specific regulations or restrictions.
C.6	Listing and admission to trading of the Offer Shares	Application has been made to list all Shares under the symbol "AVTX" on Euronext Amsterdam and on Euronext Brussels. Subject to acceleration or extension of the timetable for the Offering, trading on an "as-if-and-when-issued-and/or-delivered" basis in the Shares is expected to commence on Euronext on or about 15 March 2017, provided that the Offering Period shall be at least six business days.
C.7	Dividend policy	The Company does not expect to pay dividends in the foreseeable future.

Section D – Risks		
D.1	Key risks that are specific to the Group or its industry	The following is a selection of key risks that relate to the Group's industry, business and operations, the establishment of the Company as a publicly listed company and the Offering. In making the selection, the Group has considered circumstances such as the probability of the risk materialising on the basis of the current state of affairs, the potential impact which the materialisation of the risk could have on the Group's business, financial condition and results of operations. Investors should read, understand and consider all risk factors, set out in Chapter 4 "Risk Factors" beginning on page 52 of this Prospectus before making an investment decision to invest in the Offer Shares. **Risks relating to the Group's business and industry** • The Group has incurred losses and negative operating cash flow and has an accumulated deficit. The Group anticipates that it will continue to incur losses for the foreseeable future and the Group may never achieve or sustain profitability; • The Group's ability to generate profits from the YXY Technology depends mainly on the Joint Venture being able to successfully commercialise this technology; • The Group may not be able to successfully develop its R&D projects in the Renewable Chemistries business, which may adversely affect the Group's business, financial condition, result of operations and prospects; • In order to further develop or to commercialise its R&D projects in the Renewable Chemistries business, collaboration with partners may be necessary. If the Group fails to enter into, maintain or successfully execute joint development agreements with partners for its R&D projects in the Renewable Chemistries business, it may not be able to develop and commercialise these projects; • The Group could face technology scale-up challenges in its Renewable Chemistries business which could delay or prevent the further development and commercialisation of its projects; • The Group's revenues from its Catalysis business are, for a large part, generated from a small number of large customers; and • If the Group is unable to adequately protect its proprietary technology, products and processes, information, trade secrets and know-how this could have a material adverse effect on its business. **Risks relating to the Joint Venture** • The decision to proceed with the construction of the Reference Plant is subject to certain conditions and each of Avantium and BASF may exercise its exit right resulting in a winding up of the Joint Venture prior to a positive decision to construct the Reference Plant. No assurance can be given that the Reference Plant will be completed on schedule or within budget, or at all. • The Group does not control the Joint Venture and the interests of BASF may conflict with the interests of the Group which may have an adverse impact on the value of the Joint Venture; and • The commercial success of the Joint Venture will depend on the market acceptance of PEF and PEF products and the Joint Venture's ability to sell FDCA, PEF and Licences, which may only become clear once the Reference Plant becomes operational; and • The YXY Technology may not perform as expected at the planned scale at the Reference Plant and FDCA produced at the Reference Plant or PEF produced by third parties may not meet the required product quality standards or specifications. • Litigation or third party claims of intellectual property infringement could require substantial time and money to resolve and may result in liability for damage. Unfavourable outcomes in these proceedings could limit the Joint Venture's intellectual property rights and could prevent it from commercialising the YXY Technology.
D.3	Key risks relating to the Shares and the Offering	**Risks relating to the Offering and the Shares** • Following the Offering, the Company's largest Shareholders will be in a position to exert substantial influence on the Company and the interests pursued by these Shareholders could differ from the interests of the Company's other Shareholders; • There is a risk that an active and liquid market for the Shares will not develop and the price of the Shares may be volatile; • Fluctuations in revenues and other income generated by the Joint Venture for the

		Group can have a material impact and may lead to volatility of the Group's share price; and • The Company does not intend to pay dividends for the foreseeable future and its ability to pay dividends in the foreseeable future is uncertain.
Section E – Offer		
E.1	Net proceeds and estimated expenses	The Company estimates that the gross proceeds of the Offering for the Company will amount to approximately €90 million, assuming the issuance of 8,133,168 New Offer Shares (excluding the Increase Shares and the Over-Allotment Shares (both as defined below). Costs of the Company associated with the Offering are expected to total up to approximately €8 million (including estimated expenses relating to the Offering and payment in full of all fees and commissions payable to the Underwriters, including the discretionary fee). The minimum net proceeds of the Offering for the Company must be at least €65 million. Avantium received irrevocable commitments to subscribe for Offer Shares (as defined below) for an amount of €20 million and firm intentions to subscribe for Offer Shares for an amount of €44 million (in total an aggregate amount of €56 million net).
E.2a	Reasons for the Offering and use of proceeds	The Company currently anticipates that it will use the net proceeds of the Offering as follows: (i) approximately €65-75 million of the net proceeds will be used to fund the Joint Venture enabling it to construct and operate the Reference Plant for the commercialisation of the YXY Technology; (ii) approximately €15-20 million of the net proceeds will be used to build pilot plants for the two most advanced development projects in the Renewable Chemistries business, Project Zambezi and Project Mekong and to operate these plants up to commercial stage (approximately €7.5-10 million for each project); and (iii) the remainder will be used for other projects in Renewable Chemistries (including project Volta) and general corporate purposes in line with the Group's business and strategy, such as working capital and (re-)financing needs, general and administrative expenses, and additional costs associated with being a public company. If the net proceeds of the Offering amount to €65 million, the Company anticipates that it will use the entire amount for the funding of the Joint Venture. If the Reference Plant will not be built in accordance with the terms of the Joint Venture Agreement, the Management Board will, following approval by the Supervisory Board and the General Meeting, resolve on an alternative use of the net proceeds referred to above under (i).
E.3	Terms and conditions of the Offering	**Offer Shares** The Company is offering up to 8,133,168 New Offer Shares (excluding the Increase Shares and the Over-Allotment Shares) to raise approximately €90 million of gross proceeds. The minimum net proceeds of the Offering for the Company must be at least €65 million. The Avantium Foundation is offering 48,650 Shares (the **Management Shares**) on behalf of the Company's CEO, CFO and CTO, representing 0.6% of the Offer Shares. They will be receiving proceeds through the sale of the Management Shares to repay or compensate for financing and related costs incurred in 2007 in connection with their investment in these Shares. The Offering consists of: (i) a public offering in the Netherlands and Belgium to institutional and retail investors and (ii) private placements to certain institutional investors in various other jurisdictions. The Offering is being made outside the United States of America (the **United States** or **US**) and the Offer Shares will only be offered and sold in offshore transactions outside the United States in reliance on Regulation S (**Regulation S**) under the US Securities Act of 1933, as amended (the **US Securities Act**). The Offer Shares have not been and will not be registered under the US Securities Act. The Offer Shares are being offered only in those jurisdictions in which, and only to those persons to whom, offers of Offer Shares may lawfully be made. **Retail allocation** Provided that there is sufficient demand, it is intended that at least 10% of the Offer Shares will be allocated to retail investors in the Netherlands and Belgium. The proportion of Offer Shares allocated to retail investors in the Netherlands and Belgium may be increased or reduced if applications received from them exceed or do not reach, respectively, 10% of the Offer Shares. Retail investors in Belgium and the Netherlands will be treated equally in terms of allocation in case of an oversubscription of the Offering. **Over-Allotment Option** The Company is expected to grant to the Underwriters an option (the **Over-Allotment Option**), exercisable by ING, as stabilisation agent (the **Stabilisation Agent**), for and on behalf of the Underwriters, within 30 calendar days after the First Trading Day, pursuant to

		which the Stabilisation Agent, for and on behalf of the Underwriters, may require the Company to issue at the Offer Price up to 1,219,975 additional New Offer Shares (or up to 1,402,971 additional New Offer Shares in the event that the Increase Option is exercised in full), comprising up to 15% of the total number of New Offer Shares (the **Over-Allotment Shares**), to cover short positions resulting from any over-allotments made in connection with the Offering or stabilisation transactions, if any. **Offering Period** The Offering will take place from 09:00 Central European Time (**CET**) on 6 March 2017 until 17:30 CET on 13 March 2017 (the **Offering Period**), subject to acceleration or extension of the timetable for the Offering, provided that the Offering Period shall be at least six business days. **Offer Price and number of Offer Shares** The offer price per Offer Share (the **Offer Price**) is €11.00 (the **Offer Price**). The Company may determine, in common agreement with the Joint Global Coordinators, if the Offering is oversubscribed, to increase the total number of New Offer Shares by up to 15%, up to a maximum of 9,353,143 New Offer Shares (the **Increase Option**, and any New Offer Shares offered pursuant to the exercise of the Increase Option, the **Increase Shares**), at any time prior to allocation of the Offer Shares. Any such change will be announced in a press release that will also be posted on the Company's website. A supplement to this Prospectus will be published in the event the Offer Price is changed. Any increase of the Offer Price on the last day of the Offering Period will result in the Offering Period being extended by at least two business days; any increase of the Offer Price on the day prior to the last day of the Offering Period will result in the Offering Period being extended by at least one business day. Investors who have already agreed to purchase or subscribe for the Offer Shares before the supplement is published shall have the right, exercisable within two business days following the publication of the supplement, to withdraw their acceptances. The exact number of Offer Shares will be determined by the Company, in common agreement with the Joint Global Coordinators, after the end of the Offering Period after taking into account the conditions described in Chapter 16 "The Offering", section 16.4 "Number of Offer Shares". The exact number of Offer Shares and the maximum number of Over-Allotment Shares will be stated in a statement that will be published, ultimately on the first trading day following the end of the Offering Period, through a press release that will also be posted on the Company's website (the **Offering Statement**). **Subscriptions** Retail investors are entitled to cancel or amend their application, at the financial intermediary where their original application was submitted, at any time prior to the end of the Offering Period (if applicable, as accelerated or extended). **Allocation** The allocation of the Offer Shares is expected to take place after termination of the Offering Period on or about 14 March 2017, subject to acceleration or extension of the timetable for the Offering, provided that the Offering Period is at least six business days. Allocation of the Offer Shares to investors will be determined by the Company in common agreement with the Joint Global Coordinators on the basis of the respective demand of both retail investors and institutional investors and on the quantitative, and, for institutional investors only, the qualitative analysis of the order book, and taking into account the Offer Shares that must be allocated to the Cornerstone Investors (as defined below). Each financial intermediary will notify its own (retail or institutional) clients of their allocation in accordance with its usual procedures. The Cornerstone Investors will be fully allocated the amounts for which the Company received commitments or intentions to subscribe (see below under "Cornerstone Investors"). There is no maximum or minimum number of Offer Shares for which prospective investors may subscribe and multiple (applications for) subscriptions are permitted. In the event that the Offering is over-subscribed, investors may receive fewer Offer Shares than they applied to subscribe for. Notwithstanding the above, it is intended that at least 10% of the Offer Shares will be allocated to retail investors in the Netherlands and Belgium (see above under "Retail allocation"). The proportion of Offer Shares allocated to retail investors in the Netherlands and Belgium may be increased or decreased if applications received from them exceed or do not reach, respectively, 10% of the Offer Shares. Retail investors in Belgium and the Netherlands will be treated equally in terms of allocation in case of an oversubscription of the Offering.

		Payment Payment (in euro) for the Offer Shares is expected to take place on the Settlement Date. Taxes and expenses, if any, must be borne by the investor. Investors must pay the Offer Price in immediately available funds in full in euro on or before the Settlement Date (or earlier in the case of an early closing of the Offering and consequent acceleration of pricing, allocation, commencement of trading and Settlement). **Delivery of Shares** The Shares will be delivered in book-entry form through the facilities of Nederlands Centraal Instituut voor Giraal Effectenverkeer B.V. (**Euroclear Nederland**) in accordance with Euroclear Nederland's normal procedures applicable to equity securities and against payment in full for the Offer Shares in immediately available funds. The closing of the Offering may not take place on the Settlement Date or at all if certain conditions or events referred to in the Underwriting Agreement are not satisfied or waived or occur on or prior to such date. Such conditions include (i) the receipt of customary documentation and the satisfaction of customary conditions, (ii) confirmation that the Offer Shares have been admitted to listing on Euronext, and (iii) the completion of the Conversion and Capital Restructuring, and certain other conditions. If Settlement does not take place on the Settlement Date as planned or at all, the Offering may be withdrawn, in which case all subscriptions for Offer Shares will be disregarded, any allotments made will be deemed not to have been made and any subscription payments made will be returned without interest or other compensation. Any dealings in Offer Shares prior to Settlement are at the sole risk of the parties concerned. **Banks involved in the Offering** • Joint Global Coordinators: ING and KBC Securities are acting as joint global coordinators in the Offering (together, the **Joint Global Coordinators**); • Joint Bookrunners: ING, KBC Securities and Rabobank are acting as joint bookrunners in the Offering (together: the **Joint Bookrunners**); • Co-Lead Manager: Oddo et Cie S.C.A. is acting as co-lead manager in the Offering (the **Co-Lead Manager**); • Underwriters: the Joint Bookrunners and the Co-Lead Manager are acting as underwriters in the Offering (the **Underwriters**); • Listing and Paying Agent: ING is the Listing and Paying Agent of the Shares on Euronext; and • Stabilisation Agent: ING is acting as Stabilisation Agent with respect to the Shares on Euronext. **Cornerstone Investors** The Company has received unconditional and irrevocable commitments to participate in the Offering and subscribe for Offer Shares from certain CLA lenders for an aggregate amount of €20 million. The Company has also received firm intentions to participate in the Offering and to subscribe for Offer Shares from certain other investors for an aggregate amount of €44 million (including: (i) Stichting APG Developed Markets Equity Pool for an amount of €30 million, (ii) RobecoSAM AG and Optiverder B.V. each for an amount of €5 million and (iii) two other investors each for an amount of €2 million). These investors (together: the **Cornerstone Investors**) will be fully allocated for an aggregate amount of €64 million. Each Cornerstone Investor who will subscribe for Offer Shares for at least €5 million will receive one warrant for every four Offer Shares subscribed for, entitling it to acquire one Share per warrant for an exercise price of 125% of the Offer Price (the **Warrants**). The Cornerstone Investors will receive a total number of 1,249,998 Warrants, assuming all commitments and firm intentions result in the allocation of Offer Shares to the Cornerstone Investors. The Warrants will mature five years following the Settlement Date and are exercisable after two years following the Settlement Date. The Warrants shall not be listed on any stock exchange. **Underwriting Agreement – Conditions precedent** The Company, the Avantium Foundation and the Underwriters will enter into the Underwriting Agreement with respect to the Offering on the date of pricing and allocation. The obligations of the Underwriters under the Underwriting Agreement are subject to: (i) performance of the Share Lending Agreement, (ii) the absence of any material adverse change in the Group's business, share capital or financial position or operating performance, (iii) receipt on or before the Settlement Date of opinions on certain legal matters from legal counsel relating to, among others, the Company, this Prospectus and the Offer Shares, (iv) the absence of circumstances having arisen that would require a supplement to this Prospectus, (v) the execution of documents relating to the Offering (e.g. the Share Lending Agreement, lock-up arrangements and investor commitment letters) and such documents being in full force and effect, (vi) the

		admission of the Shares to listing and trading on Euronext Amsterdam and Euronext Brussels, (vii) the completion of the Conversion and Capital Restructuring, and (viii) certain other customary closing conditions, including, among others, the accuracy of the warranties provided by the Company and the Avantium Foundation pursuant to the Underwriting Agreement, obtaining all relevant corporate approvals and the compliance by the Company with its obligations under the Underwriting Agreement and the publicity guidelines. The Joint Global Coordinators have the right to waive the satisfaction of any such conditions or part thereof. **Governing law and competent courts** This Prospectus and the Offering are governed by Dutch law. All disputes arising in connection with this Prospectus and the Offering shall be subject to the non-exclusive jurisdiction of the courts in Amsterdam, the Netherlands.
E.4	Interests material to the Offering (including conflicts of interests)	Certain of the Underwriters, the Listing and Paying Agent and/or their respective affiliates may in the future, from time to time, engage in commercial banking, investment banking and financial advisory and ancillary activities in the ordinary course of their business with the Company or any parties related to any of them, in respect of which they have received and/or may in the future receive customary fees and commissions. Additionally, the Underwriters and/or their respective affiliates may in the future hold, in the ordinary course of their business, the Company's securities for investment purposes. See Chapter 17 "Plan of Distribution", section 17.3 "Potential conflicts of interest". As a result of acting in the capacities described above, the Underwriters, the Listing and Paying Agent and their respective affiliates may have interests that may not be aligned, or could possibly conflict with the interests of (prospective) investors and the Group's interest. ING Participaties, which is indirectly controlled by ING, holds 13.8% of the Shares at the date of this Prospectus and is expected to remain one of the major Shareholders following Admission, resulting in an indirect economic interest in the success of the Offering. Consequently, ING Participaties may have interests that may not be aligned, or could possibly conflict with the interests of investors. In respect thereof, ING has procedures in place, such as Chinese walls procedures based on rules and regulations and internal policies to prevent the sharing of information and any conflicts of interest between any of its group companies, affiliates, directors and employees engaged in its merchant banking activities and in its asset management activities. Furthermore, the CLA Lenders will convert their Convertible Loans into Shares at a conversion price of 75% of the Offer Price in the Offering. The economic interest of the CLA Lenders depends on *inter alia* the success of the Offering, the Offer Price and future trading price of the Shares. As a result, the CLA Lenders may have an interest that may not be aligned, or could potentially conflict, with the interest of the Company.
E.5	Person or entity offering to sell the Offer Shares and lock-up arrangements	Pursuant to separate lock-up letters, the existing Shareholders, the CLA Lenders and the Avantium Foundation agreed with the Joint Global Coordinators that, for a period of 180 days after the Settlement Date, they will not, subject to customary exceptions, issue, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any Shares or any securities exchangeable for or convertible into or exercisable for Shares, or enter into any other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Shares, whether any such transactions are to be settled by delivery of the Shares or other securities, in cash or otherwise (the Hard Lock-up Period). For a period of 180 days following the Hard Lock-up Period, the existing Shareholders will not, subject to customary exceptions, do any of the foregoing without the prior consent of the Joint Global Coordinators. This lock-up arrangement relates to the Shares and options held at the date of this Prospectus by all existing Shareholders and the Avantium Foundation and the Shares acquired by the CLA Lenders pursuant to the conversion of the Convertible Loans immediately after Settlement. 15,839,879 Shares and 1,230,044 options will be subject to the lock-up arrangement. The customary exceptions relate to the sale of the Management Shares in the Offering, the entering into of the Share Lending Agreement, any transfer of Shares following the acceptance of a public takeover bid, any transfer of Shares to shareholder's subsidiaries and a sale of the Shares pursuant to any security rights existing as of the date of the Underwriting Agreement or any coordinated sale. At the date of this Prospectus, according to the Shareholders' register, none of the Shares are encumbered. The Company undertakes in relation to the Offering to a stand-still in relation to its securities that will last until 365 days after the Settlement Date, limiting any issue, lending, offer and sale of its securities, otherwise than with the prior written consent of the Underwriters, subject to customary carve-outs, relating to *inter alia* the issue or sale of Offer Shares, the Capital Restructuring or granting or exercise of options and issuance of Shares pursuant to employee

		incentive schemes.
E.6	Dilution	The voting interest of the current holders of Shares will be diluted as a result of the issuance of the New Offer Shares. The maximum dilution for these holders of Shares pursuant to the issuance of the New Offer Shares would be 51%, following conversion of the Convertible Loans and assuming the issuance of 10,756,114 New Offer Shares (which includes the Increase Shares and the Over-Allotment Shares). The maximum dilution for these holders of Shares would increase to 53% if all Warrants would be exercised.
E.7	Estimated expenses charged to the investors by the Company	Not applicable; no expenses will be charged to investors by the Company in relation to the Offering.

2 SAMENVATTING

Dit hoofdstuk bevat een Nederlandse vertaling van de Engelstalige samenvatting van het prospectus van 3 maart 2017 (het Prospectus). In geval van een mogelijke discrepantie in uitleg van begrippen prevaleert de Engelstalige samenvatting van dit Prospectus. *Samenvattingen van prospectussen zijn opgebouwd uit verplicht te verstrekken informatie bekend als 'Elementen'. Deze Elementen zijn genummerd in Deel A tot E (A.1 – E.7). Deze samenvatting bevat alle Elementen die moeten worden opgenomen in een samenvatting voor dit type effecten en uitgevende instelling. Omdat sommige Elementen niet hoeven te worden besproken, kan de nummering van de Elementen verspringen.* *Ook al moet een Element in de samenvatting ingevoegd worden vanwege het type effecten en de uitgevende instelling, is het mogelijk dat er over het Element geen relevante informatie kan worden verstrekt. In dit geval wordt er een korte beschrijving van het Element opgenomen in de samenvatting, met de vermelding 'niet van toepassing'*

	Afdeling A – Inleiding en Waarschuwingen	
A.1	Inleiding en waarschuwingen	Deze samenvatting moet worden gelezen als een inleiding tot dit prospectus (dit **Prospectus**) met betrekking tot de primaire emissie van gewone aandelen met elk een nominale waarde van € 0,10 (de **Aanbieding**) door Avantium N.V. (het **Bedrijf** of **Avantium**). Het Bedrijf biedt maximaal 10.756.114 nieuw uitgegeven aandelen (de **Nieuwe Aangeboden Aandelen**, waartoe ook, tenzij in de context anders wordt aangegeven, de Verhogingsaandelen en de Overtoewijzingsaandelen behoren, beide zoals hieronder gedefinieerd). De stichting Administratiekantoor Avantium (de **Stichting Avantium**) biedt namens de CEO, CFO en CTO (de **Bestuursleden**) Aandelen aan (de **Bestuursaandelen**, samen met de Nieuwe Aangeboden Aandelen de **Aangeboden Aandelen**). Er is een aanvraag ingediend om alle uitgegeven gewone aandelen van het Bedrijf (de **Aandelen**) toe te laten tot en te noteren op Euronext Amsterdam, een gereglementeerde markt van Euronext Amsterdam N.V., (**Euronext Amsterdam**) en Euronext Brussel, een gereglementeerde markt van Euronext Brussel NV/SA (**Euronext Brussel**, samen met Euronext Amsterdam **Euronext**) (de **Toelating**). De belegger behoort elk besluit om in de Aangeboden Aandelen te investeren te baseren op overwegingen inzake de volledige inhoud van dit Prospectus. Wanneer een gerechtelijke procedure met betrekking tot de in dit Prospectus vervatte informatie wordt gestart voor een rechtbank, zou de eisende belegger, volgens de nationale wetgeving van de lidstaten van de Europese Economische Ruimte (de **Lidstaten**), misschien de kosten voor de vertaling van dit Prospectus moeten dragen, alvorens met de gerechtelijke procedure wordt begonnen. Alleen de personen die de samenvatting, met inbegrip van een vertaling ervan, hebben ingediend, kunnen wettelijk aansprakelijk worden gesteld indien de samenvatting, wanneer zij samen met de andere delen van dit Prospectus wordt gelezen, misleidend, onjuist of inconsistent is, of indien zij, wanneer zij samen met de andere delen van dit Prospectus wordt gelezen, niet de kerngegevens bevat om beleggers te helpen wanneer zij overwegen in de Aangeboden Aandelen te investeren.
A.2	Toestemming, aanduiding, voorwaarden en kennisgeving	Niet van toepassing; er volgt hierna geen publieke doorverkoop of definitieve plaatsing van de Aangeboden Aandelen door financiële tussenpersonen.
	Afdeling B – De Uitgevende Instelling	
B.1	Statutaire en handelsnaam van de Vennootschap	Avantium N.V. is op de datum van dit Prospectus nog steeds een besloten vennootschap met beperkte aansprakelijkheid genaamd Avantium Holding B.V. Deze wordt naar verwachting vóór de Afwikkeling (zoals hieronder gedefinieerd) omgezet in een naamloze vennootschap, waarbij de wettelijke en commerciële naam van het Bedrijf wordt veranderd in Avantium N.V.
B.2	Vestigings-plaats, rechtsvorm, wetgeving en land van oprichting	Het Bedrijf is een besloten vennootschap met beperkte aansprakelijkheid, opgericht naar Nederlands recht en gevestigd in Nederland. Naar verwachting zal het Bedrijf vóór de Afwikkeling (zoals hieronder gedefinieerd) worden omgezet in een naamloze vennootschap (de **Omzetting**). Het Bedrijf is statutair gevestigd te Amsterdam, Nederland.
B.3	Kerngegevens betreffende de aard van de huidige werkzaam-heden en belangrijkste	Het Bedrijf, inclusief zijn dochterondernemingen (de **Groep**), vervult een leidinggevende rol in de chemische technologie waarbij het innovatieve hernieuwbare chemische oplossingen ontwikkelt en commercieel exploiteert als duurzame alternatieven voor op fossiele grondstoffen gebaseerde chemische stoffen en materialen. Avantium streeft ernaar om samen met zijn partners over de hele wereld grensverleggende, bedrijfseigen chemische technologieën en productieprocessen te ontwikkelen voor de omzetting van op biomateriaal gebaseerde grondstoffen in duurzame producten met een concurrerende prijs en hoge

	bedrijfsactiviteiten van de Groep	prestaties. Avantium biedt ook geavanceerde dienstverlening en systemen voor katalyseonderzoek en -ontwikkeling aan gerenommeerde chemische en energiebedrijven en raffinaderijen. De Joint Venture (zoals hieronder gedefinieerd) met BASF Nederland B.V. (**BASF**) wordt niet geïntegreerd in het Bedrijf en zal dan ook geen deel uitmaken van de Groep. De bedrijfsactiviteiten van de Groep bestaan uit (i) 'YXY-technologie', die is ondergebracht in de Joint Venture (zoals hieronder gedefinieerd), (ii) 'Renewable Chemistries' en (iii) 'Catalysis'. In de periode 2013-2015 werd voor de bedrijfsactiviteit YXY-technologie voor € 2,9 miljoen aan opbrengsten geregistreerd. De ontwikkelingsprogramma's voor de bedrijfsactiviteit Renewable Chemistries hebben tussen 2013 en 2015 geen opbrengsten gegenereerd. In de periode 2013-2015 genereerde Avantium €31 miljoen aan opbrengsten uit de bedrijfsactiviteit Catalysis. Op 30 November 2016 richtte Avantium met BASF een joint venture op, Synvina C.V., waarin het een minderheidsbelang heeft van 49%, om de YXY-technologie commercieel te exploiteren (de **Joint Venture**). Avantium bracht daarin de YXY-technologie, de proeffabriek in Geleen, die sinds 2011 operationeel is (de **Proeffabriek**) en de bijbehorende octrooien, kennis en werknemers onder. De Joint Venture is van plan de allereerste fabriek te bouwen en exploiteren die op commerciële schaal FDCA gaat produceren (de **Referentiefabriek**). Naar verwachting wordt aan het eind van 2018 met de bouw van de Referentiefabriek begonnen en zal in 2021 worden begonnen met de verkoop van FDCA en PEF. De Joint Venture is van plan om vervolgens aan BASF en andere bedrijven licenties af te geven voor de YXY-technologie, om vanaf 2021 een wereldwijde productie op commerciële schaal mogelijk te maken. FDCA is een bouwsteen die kan worden gebruikt voor de productie van polyesters, zoals PEF, een polymeer bestaande uit 100% biologisch materiaal, dat kan worden gebruikt voor verpakkingen van frisdranken, water, alcoholische dranken, vruchtensappen, voedsel en non-foodproducten en voor folie- en vezeltoepassingen. De YXY-technologie is een uiterst geavanceerde technologie die door de bedrijfsactiviteit Renewable Chemistries is ontwikkeld. Twee andere projecten zijn al of komen in de proeffase: project Zambezi en project Mekong. Project Zambezi heeft als doel een kosteneffectief proces te ontwikkelen voor de productie van hoogzuivere glucose uit niet voor voedsel bestemde biomassa die kan worden omgezet in biochemische stoffen, zoals FDCA, melkzuur en antibiotica. Project Mekong richt zich op een eenstapsproces voor de productie van MEG uit glucose. De huidige markt voor MEG is grotendeels gebaseerd op fossiele grondstoffen en vertegenwoordigt een jaaromzet van meer dan 20 miljard Amerikaanse dollar. Op biologisch materiaal gebaseerde MEG is chemisch gezien identiek aan op fossiele grondstoffen gebaseerde MEG. Avantium is van plan om binnen twee jaar te beginnen met de bouw van specifiek voor deze projecten bestemde proeffabrieken. Project Volta is in de laboratoriumfase en is gericht op het rechtstreeks gebruik van elektriciteit bij chemische processen, waaronder de conversie van CO_2 in chemische bouwstenen. Zes andere Renewable Chemistries projecten zijn momenteel in ontwikkeling, waarvan twee in de conceptfase en vier in de laboratoriumfase. Al meer dan vijftien jaar biedt Catalysis geavanceerde dienstverlening en systemen voor katalyseonderzoek en -ontwikkeling aan bedrijven in de chemische, raffinaderij- en energiesector. De Groep heeft een sterke internationale klantenbasis opgebouwd, inclusief enkele belangrijke marktleiders.
B.4a	Belangrijkste recente trends die invloed hebben op Groep en de sectoren waarin zij actief is	Uit de bronnen genoemd in hoofdstuk 5 'Belangrijke informatie', afdeling 5.6 'Markt- en sectorinformatie' blijkt dat de volgende belangrijke ontwikkelingen van invloed zijn op de relevante markten: Chemie: • aardolie is een eindige en niet-hernieuwbare hulpbron waarnaar steeds meer vraag is • noodzaak om broeikasgasemissies en milieuvoetafdruk te verminderen • steeds meer regulering door overheid • steeds meer vraag naar hernieuwbare, duurzame producten en een kringloopeconomie • onstabiele prijs voor aardolie Kunststoffen: • duurzame productie van producten en producten met groen etiket • vers bereid voedsel en voedselafval • merkopbouw via verpakkingen • onderverdeling, recycling, schone etikettering, gemak en licht gewicht

<table>
<tr><td></td><td></td><td>Op biomateriaal gebaseerde grondstoffen:
• eindigen van het Europese quotasysteem voor sucrose en fructose
• zorgpunten met betrekking tot toepassingen van niet voor voedsel bestemde biomassa
• afnemende vraag naar glucose-fructosestroop door toenemende bezorgdheid over gezondheid vanwege overmatige suikerconsumptie

Katalysator:
• valorisatie van aardolie en gas bij de bron
• diversificatie van grondstoffen
• strengere wetgeving</td></tr>
<tr><td>B.5</td><td>Beschrijving van de Groep en de positie van de Vennootschap daarin</td><td>Het Bedrijf is de moedermaatschappij van een groep operationele bedrijven. De voornaamste activa van het Bedrijf bestaan uit 100% van de aandelenbelangen die het direct of indirect houdt in zijn operationele dochterondernemingen, en 49% van de aandelenbelangen die het houdt in de Joint Venture.</td></tr>
<tr><td>B.6</td><td>Belangrijke aandeelhouders</td><td>In de volgende tabel staan de gegevens met betrekking tot het effectieve eigendom van iedere houder van Aandelen (een Aandeelhouder) of groep gelieerde Aandeelhouders die momenteel 3% of meer van het geplaatste en uitstaande aandelenkapitaal van het Bedrijf in eigendom heeft.
<table>
<tr><th>Aandeelhouder</th><th colspan="2">Deel van het aandelenkapitaal in eigendom</th></tr>
<tr><th></th><th>Aantal Aandelen</th><th>Percentage van het aandelenkapitaal en stemrechten[(3)]</th></tr>
<tr><td>FCPR Sofinnova Capital VI</td><td>26.218.429</td><td>19.9%</td></tr>
<tr><td>Capricorn Cleantech Fund N.V.</td><td>23.214.852</td><td>17.6%</td></tr>
<tr><td>ING Corporate Investments Participaties B.V.</td><td>18.182.700</td><td>13.8%</td></tr>
<tr><td>Coöperatieve Aescap Venture I U.A.</td><td>16.863.952</td><td>12.8%</td></tr>
<tr><td>Rise Merit Limited[(1)]</td><td>10.202.000</td><td>7.7%</td></tr>
<tr><td>Navitas B.V.</td><td>8.694.267</td><td>6.6%</td></tr>
<tr><td>FCPR Aster II</td><td>7.282.897</td><td>5.5%</td></tr>
<tr><td>Timber Invest 1 Coöperatief U.A.</td><td>7.282.897</td><td>5.5%</td></tr>
<tr><td>European Refreshments[(2)]</td><td>5.101.000</td><td>3.9%</td></tr>
</table>
(1) Rise Merit Limited wordt indirect gecontroleerd door Swire Pacific Ltd.
(2) European Refreshments wordt indirect gecontroleerd door The Coca-Cola Company.
(3) De overige Aandeelhouders, inclusief de Stichting Avantium, houden gezamenlijk 8.823.505 Aandelen, hetgeen 6.7% van het aandelenkapitaal en de stemrechten vertegenwoordigd.

In de eerste kolom van de tabel staan gegevens over de Aandelen die in eigendom zijn van alle Aandeelhouders die bij de Afwikkeling 3% of meer van het geplaatste en uitstaande aandelenkapitaal van het Bedrijf in bezit hebben na een herstructurering van het bedrijfskapitaal (de Herstructurering van het Bedrijfskapitaal), bestaande uit een wijziging van de statuten van het Bedrijf die een omgekeerde aandelensplitsing en zodoende een verhoging van de nominale waarde van de Aandelen van €0,01 naar €0,10 mogelijk maakt. In de tweede en derde kolom van de tabel hieronder staan gegevens over de Aandelen die in eigendom zijn van Aandeelhouders die direct na de Afwikkeling 3% of meer van het geplaatste en uitstaande aandelenkapitaal van het Bedrijf in bezit hebben, rekening houdend met (i) de conversie van de converteerbare leningen die aan het Bedrijf in maart 2016 zijn verstrekt door PMV-TINA Comm. VA (PMV), SFPI-FPIM SA/NV (FPIM) en aan sommige bestaande Aandeelhouders ervan, inclusief FCPR Sofinnova Capital VI (Sofinnova), Capricorn Cleantech Fund N.V. (indirect) (Capricorn), ING Corporate Investments Participaties B.V.</td></tr>
</table>

(**ING Participaties**), Navitas B.V. (**Navitas**), FCPR Aster II (**Aster II**) en Timber Invest 1 Coöperatief U.A. (**Timber Invest 1**) (samen de **CLA-kredietverstrekkers**) in Aandelen tegen een conversieprijs van 75% van de Biedprijs (de **Converteerbare Leningen**) (verwijzend naar hoofdstuk 10 'Operationele en financiële analyse', afdeling 10.8 'Liquiditeit en kapitaalmiddelen', onder 'Overeenkomst over converteerbare leningen') en (ii) uitgaande van een uitgifte van 8.133.168 Nieuwe Aangeboden Aandelen.

Aandeelhouder	**Aandelen in bezit ten tijde van de Afwikkeling, na de Herstructurering van het Bedrijfskapitaal**		**Aandelen in bezit direct na de Afwikkeling, zonder uitoefening van de Verhogingsoptie en de Overtoewijzingsoptie**		**Aandelen in bezit direct na de Afwikkeling, met volledige uitoefening van de Verhogingsoptie en de Overtoewijzingsoptie**	
	Bedrag	%	Bedrag	%	Bedrag	%
FCPR Sofinnova Capital VI	2.621.842	19,9%	2.929.088	12,2%	2.929.088	11,0%
Stichting APG Developed Markets Equity Pool	-	0.0%	2,727,272	11,4%	2,727,272	10,2%
Capricorn Cleantech Fund N.V.	2.321.485	17,6%	2.469.127	10,3%	2.469.127	9,3%
PMV-TINA Comm. VA	-	0,0%	2.261.414	9,4%	2.261.414	8,5%
ING Corporate Investments Participaties B.V.	1.818.270	13,8%	2.012.258	8,4%	2.012.258	7,6%
Coöperatieve Aescap Venture I U.A.	1.686.395	12,8%	1.686.395	7,0%	1.686.395	6,3%
SFPI-FPIM SA/NV	-	0,0%	1.130.909	4,7%	1.130.909	4,2%
Rise Merit Limited	1.020.200	7,1%	1.020.200	4,2%	1.020.200	3,8%
Navitas B.V.	869.426	6,6%	968.500	4,0%	968.500	3,6%
FCPR Aster II	728.289	5,5%	814.140	3,4%	814.140	3,1%
Timber Invest 1 Coöperatief U.A.	728.289	5,5%	814.113	3,4%	814.113	3,1%
European Refreshments	510.100	3,9%	510.100	2,1%	510.100	1,9%
New (public) investors	n/a	n/a	3.633.182	15,1%	6.256.128	23,5%

Alle Aandeelhouders hebben dezelfde stemrechten.

B.7	Geselecteerde belangrijke historische financiële informatie	De geselecteerde historische financiële gegevens van de Groep die in onderstaande tabellen staan, moeten worden gelezen in combinatie met de informatie die is opgenomen in hoofdstuk 5 'Belangrijke informatie', afdeling 5.4 'Presentatie van financiële en andere informatie', hoofdstuk 8 'Kapitalisatie en de schuldenlast', hoofdstuk 9 'Bedrijfsresultaten en financiële toestand' en de geconsolideerde jaarrekening, inclusief opmerkingen daarbij, opgenomen in hoofdstuk 22 'Toelichtingen bij de jaarrekening' (de **Financiële Informatie**). De financiële gegevens voor het boekjaar eindigend op 31 december 2014 (**FY 2014**), zijn (i) afgeleid uit de vergelijkende gegevens zoals opgenomen in de gecontroleerde geconsolideerde jaarrekening voor het boekjaar eindigend op 31 december 2015 (**FY 2015**), die verschillen van de gecontroleerde financiële gegevens voor FY 2014 omdat de bedrijfsactiviteit YXY-technologie in 2015 een beëindigde bedrijfsactiviteit werd, en (ii) voor vergelijkingsdoeleinden afgeleid uit de financiële gegevens voor FY 2014 zoals opgenomen in

de gecontroleerde geconsolideerde jaarrekening voor FY 2014, waarin de bedrijfsactiviteit YXY-technologie onder voortgezette bedrijfsactiviteiten en de bedrijfsactiviteit Pharma onder beëindigde bedrijfsactiviteiten is opgenomen. De financiële gegevens voor het boekjaar eindigend op 31 december 2013 (**FY 2013**) zijn afgeleid uit de gecontroleerde geconsolideerde jaarrekening voor FY 2014 en hierin is de bedrijfsactiviteit YXY-technologie opgenomen onder voortgezette bedrijfsactiviteiten en de bedrijfsactiviteit Pharma onder beëindigde bedrijfsactiviteiten. In de financiële gegevens voor de eerste negen maanden van 2016 is de bedrijfsactiviteit YXY-technologie opgenomen onder beëindigde bedrijfsactiviteiten. In de vergelijkende cijfers voor de eerste negen maanden van 2015 zijn de gegevens voor zowel de bedrijfsactiviteit YXY-technologie als de bedrijfsactiviteit Pharma opgenomen onder beëindigde bedrijfsactiviteiten.

Zie voor meer informatie hoofdstuk 5 'Belangrijke informatie', afdeling 5.4 'Presentatie van financiële en andere informatie'.

Geconsolideerd overzicht van gerealiseerde en niet-gerealiseerde resultaten

in Euro x 1,000	Q3 2016 (*1) Niet-gecon-troleerd	Q3 2015 (*2) Niet-gecon-troleerd	FY 2015 (*3)	FY 2014 (*4)	FY 2014 (*5)	FY 2013 (*6)
Voortgezette bedrijfsactiviteiten						
Opbrengsten	6.148	7.008	10.266	9.628	10.306	13.070
Uitgaven (*7)						
Directe verkoopkosten	- 1.088	- 858	- 1.767	- 2.276		
Kosten voor personeelsbeloning	- 4.922	- 5.661	- 6.841	- 6.108		
Afschrijvingen en bijzondere waardeverminderingen	- 577	- 447	- 621	- 569		
Huisvestings- en kantoorkosten	- 1.458	- 1.232	- 1.846	- 1.356		
Octrooi-, licentie-, juridische en advieskosten	- 1.732	- 622	- 1.002	- 1.009		
Laboratoriumkosten	- 816	- 784	- 1.009	- 1.197		
Marketing- en representatiekosten and representation	- 498	- 425	- 559	- 827		
Overige exploitatiekosten	- 320	- 35	- 94	- 411		
Kostprijs van de omzet					- 9.687	- 8.958
Verkoop- en marketingkosten					- 2.156	- 2.030
Onderzoeks- en ontwikkelingskosten					- 9.744	- 8.807
Algemene en administratieve kosten					- 2.938	- 3.548
Operationeel verlies	**- 5.263**	**- 3.056**	**- 3.473**	**- 4.126**	**- 14.221**	**- 10.273**
Financiële baten	-	79	124	268	268	202
Financiële lasten	- 1.433	- 209	- 1	- 598	- 845	- 981
Financiële lasten - netto	**- 1.433**	**- 130**	**123**	**- 330**	**- 577**	**- 779**
Verlies voor winstbelastingen	**- 6.696**	**- 3.185**	**- 3.350**	**- 4.456**	**- 14.798**	**- 11.053**
Lasten uit hoofde van winstbelastingen	-	-	-	-		
Verlies over het boekjaar uit voortgezette bedrijfs	**- 6.696**	**- 3.185**	**- 3.350**	**- 4.456**	**- 14.798**	**- 11.053**
Verlies over het boekjaar uit beëindigde bedrijfsa	**- 5.352**	**- 7.022**	**- 9.828**	**- 9.899**	**442**	**- 73**
Verlies voor de periode	**- 12.048**	**- 10.208**	**- 13.178**	**- 14.356**	**- 14.356**	**- 11.125**
Totaal aan gerealiseerde en niet-gerealiseerde re	**- 12.048**	**- 10.208**	**- 13.178**	**- 14.356**	**- 14.356**	**- 11.125**
Verlies toerekenbaar aan:						
eigenaars van de moedermaatschappij	- 12.048	- 10.208	- 13.178	- 14.798	- 14.798	- 11.053
minderheidsbelang	-	-	-	442	442	- 73
	- 12.048	**- 10.208**	**- 13.178**	**- 14.356**	**- 14.356**	**- 11.125**
Totaal aan gerealiseerde en niet-gerealiseerde resultaten toerekenbaar aan:						
eigenaars van de moedermaatschappij	- 12.048	- 10.208	- 13.178	- 14.798	- 14.798	- 11.053
minderheidsbelang	-	-	-	442	442	- 73
	- 12.048	**- 10.208**	**- 13.178**	**- 14.356**	**- 14.356**	**- 11.125**

(1) De cijfers in deze kolom zijn niet gecontroleerd en afgeleid uit de tussentijdse verkorte geconsolideerde financiële overzichten van 9M 2016. De bedrijfsactiviteit YXY-technologie is gerapporteerd onder beëindigde bedrijfsactiviteiten.

(2) De cijfers in deze kolom zijn niet gecontroleerd en afgeleid uit de vergelijkende cijfers van de tussentijdse verkorte geconsolideerde financiële overzichten van 9M 2016. De bedrijfsactiviteit YXY-technologie en het resultaat van de verkoop van de bedrijfsactiviteit Pharma zijn gerapporteerd onder beëindigde bedrijfsactiviteiten.

(3) De cijfers in deze kolom zijn afgeleid uit de gecontroleerde jaarrekening van FY 2015. De bedrijfsactiviteit YXY-technologie en het resultaat van de verkoop van de bedrijfsactiviteit Pharma zijn gerapporteerd onder beëindigde bedrijfsactiviteiten.

(4) De cijfers in deze kolom zijn afgeleid uit de vergelijkende cijfers voor FY 2014 in de gecontroleerde jaarrekening van FY 2015. De bedrijfsactiviteiten YXY-technologie en Pharma zijn gerapporteerd onder beëindigde bedrijfsactiviteiten.

(5) De cijfers in deze kolom zijn afgeleid uit de gecontroleerde jaarrekening van FY 2014. De bedrijfsactiviteit YXY-technologie is gerapporteerd onder voortgezette bedrijfsactiviteiten en de bedrijfsactiviteit Pharma is gerapporteerd onder beëindigde bedrijfsactiviteiten.

(6) De cijfers in deze kolom zijn afgeleid uit de vergelijkende cijfers voor FY 2013 in de gecontroleerde jaarrekening van FY 2014. De bedrijfsactiviteit YXY-technologie is gerapporteerd onder voortgezette bedrijfsactiviteiten en de bedrijfsactiviteit Pharma is

gerapporteerd onder beëindigde bedrijfsactiviteiten.

(7) De Groep heeft in het gerapporteerde geconsolideerde overzicht van gerealiseerde en niet-gerealiseerde resultaten in de jaarrekening voor 2015 de uitgavecategorieën gewijzigd om de feitelijk gedane uitgaven beter weer te geven en de consistentie tussen interne en externe rapportages te waarborgen.

Geconsolideerde balans

in Euro x 1,000	Q3 2016 (*1) Unaudited	FY 2015 (*2)	FY 2014 (*3)	FY 2013 (*4)
Activa				
Vaste activa				
Materiële vaste activa	3.767	4.017	9.180	9.606
Immateriële vaste activa	325	359	228	292
Totaal vaste activa	**4.092**	**4.376**	**9.408**	**9.898**
Vlottende activa				
Voorraden	985	1.045	896	1.309
Handelsvorderingen en overige vorderingen	6.248	5.086	5.505	4.917
Geldmiddelen en kasequivalenten	13.852	6.981	19.140	5.425
Totaal vlottende activa	**21.085**	**13.112**	**25.541**	**11.652**
Activa aangehouden voor verkoop	7.943	5.424	419	-
Totaal activa	**33.120**	**22.913**	**35.369**	**21.550**
Passiva				
Langlopende passiva				
Leningen	3.758	3.600	3.865	5.651
Voorzieningen voor risico's en verplichtingen	-	-	266	256
Totaal langlopende passiva	**3.758**	**3.600**	**4.132**	**5.907**
Kortlopende passiva				
Leningen	22.409	400	2.033	10.674
Handelsschulden en overige schulden	8.338	6.196	7.472	7.997
Voorzieningen voor risico's en verplichtingen	175	168	264	193
Totaal kortlopende passiva	**30.923**	**6.764**	**9.769**	**18.864**
Passiva betreffende activa aangehouden voor verkoop	-	3.190	(62)	-
Totaal passiva	**34.681**	**13.555**	**13.838**	**24.771**
Eigen vermogen				
Aan eigenaars van de moedermaatschappij toerekenbaar eigen vermogen				
Gewone aandelen	1.319	1.319	1.319	927
Agio	81.272	81.272	81.272	43.491
Overige reserves	6.070	5.266	5.207	4.272
Ingehouden winsten	(90.223)	(78.499)	(66.784)	(51.986)
Totaal van aan eigenaars van de moedermaatschappij toerekenbaar eigen vermogen	(1.562)	9.358	21.014	(3.296)
Minderheidsbelang	-	-	517	75
Totaal eigen vermogen	**-1.562**	**9.358**	**21.531**	**-3.221**
Totaal eigen vermogen en passiva	**33.120**	**22.913**	**35.369**	**21.550**

(1) De cijfers in deze kolom zijn niet gecontroleerd en afgeleid uit de tussentijdse verkorte geconsolideerde financiële overzichten van 9M 2016. De activa en passiva van de bedrijfsactiviteit YXY-technologie zijn gerapporteerd als aangehouden voor verkoop.

(2) De cijfers in deze kolom zijn afgeleid uit de gecontroleerde jaarrekening van FY 2015. De activa en passiva van de bedrijfsactiviteit YXY-technologie zijn gerapporteerd als aangehouden voor verkoop. De bedrijfsactiviteit Pharma werd op 31 december 2014 daadwerkelijk verkocht en vervolgens uitgesloten van de cijfers van de Groep.

(3) De cijfers in deze kolom zijn afgeleid uit de gecontroleerde jaarrekening van FY 2014. De activa en passiva van de bedrijfsactiviteit Pharma zijn gerapporteerd als aangehouden voor verkoop.

(4) De cijfers in deze kolom zijn afgeleid uit de vergelijkende cijfers voor FY 2013 in de gecontroleerde jaarrekening van FY 2014 en zijn gelijkwaardig aan de vergelijkende cijfers voor FY 2014 die in de gecontroleerde jaarrekening voor FY 2014 zijn opgenomen.

Consolideerd kasstroomoverzicht

in Euro x 1,000	Q3 YTD 2016 (*1) Niet-gecontroleer	Q3 YTD 2015 (*2) Niet-gecontroleer	FY 2015 (*3)	FY 2014 (*4)	FY 2014 (*5)	FY 2013 (*6)
Kasstromen uit voortgezette bedrijfsactiviteiten						
Kasstromen uit bedrijfsactiviteiten						
Verlies over het boekejaar uit voortgezette bedrijfsactiviteiten	(6.696)	(3.185)	(3.350)	(4.456)	(14.798)	(11.053)
Aanpassingen voor:						
- Afschrijvingen	487	406	568	500	2.099	1.951
- Amortisatie	90	41	53	69	88	151
- Waardevermindering	-	-	-	-	-	-
- Op aandelen gebaseerde betaling	1.128	586	1.005	935	935	1.192
- Financiële lasten - netto	1.433	130	(123)	330	577	778
Veranderingen in het bedrijfskapitaal (uitgezonderd op consolidatieniveau ontsatene valutaverschillen):						
- (Toename) in voorraden	60	(283)	(255)	136	31	(305)
- (Toename) in handelsvorderingen en overige vorderingen	(1.162)	2.711	(465)	(828)	(970)	(708)
- Toename in handelsschulden en overige schulden	2.142	(3.359)	590	(1.975)	(457)	128
- Toename in voorzieningen	7	(372)	(362)	97	97	102
	(2.512)	(3.325)	(2.337)	(5.191)	(12.398)	(7.764)
Rente (betaald)	(2)	(9)	(60)	(159)	(159)	(115)
Nettogeldmiddelen uit bedrijfsactiviteiten	(2.514)	(3.334)	(2.397)	(5.350)	(12.557)	(7.879)
Kasstromen uit investeringsactiviteiten						
Aankopen van materiële vaste activa	(244)	(1.625)	(2.126)	(1.635)	(1.635)	(1.960)
Aankopen van immateriële vaste activa	(56)	(31)	(191)	(185)	(185)	(26)
Nettogeldmiddelen uit investeringsactiviteiten	(300)	(1.656)	(2.317)	(1.820)	(1.820)	(1.986)
Kasstroom uit financiële activiteiten						
Opbrengsten uit de uitgifte van gewone aandelen	-	-	-	27.035	27.035	-
Renteontvangsten	-	44	124	268	268	203
Innovatielening	-	-	224	-	-	1.222
Converteerbare obligatie	20.000	-	-	-	-	10.000
Terugbetaling van ontvangen leningen	-	-	(5)	(5)	(5)	(5)
Nettogeldmiddelen gegenereerd door financiële	20.000	44	343	27.298	27.298	11.421
Kasstromen uit beëindigde bedrijfsactiviteiten						
Nettogeldmiddelen uit / (gebruikt voor) bedrijfsactiviteiten	(7.578)	(2.403)	(3.847)	(6.461)	745	(37)
Nettogeldmiddelen uit / (gebruikt voor) investeringsactiviteiten	(2.738)	-	-	-	-	-
Nettogeldmiddelen uit / (gebruikt voor) financiële activiteiten	-	(4.000)	(4.000)	21	21	-
Veranderingen in geldmiddelen uit beëinddigde bedrijfsactiviteiten	**(10.316)**	**(6.403)**	**(7.847)**	**(6.440)**	**767**	**(37)**
Nettotoename / (-afname) in geldmiddelen,	**17.186**	**(4.946)**	**(4.371)**	**20.128**	**12.921**	**1.556**
Geldmiddelen en kasequivalenten bij begin boekjaar	6.981	19.140	19.140	5.425	5.425	3.904
Gevolgen van wisselkoersveranderingen	(0)	35	59	26	26	2
Geldmiddelen en kasequivalenten uit voortgezette bedrijfsactiviteiten aan het eind van het boekjaar	**24.168**	**14.230**	**14.828**	**25.580**	**18.373**	**5.462**
Geldmiddelen en kasequivalenten aan het eind van het boekjaar	**13.852**	**7.827**	**6.981**	**19.140**	**19.140**	**5.425**

(1) De cijfers in deze kolom zijn niet gecontroleerd en afgeleid uit de tussentijdse verkorte geconsolideerde financiële overzichten van 9M 2016. De bedrijfsactiviteit YXY-technologie is gerapporteerd onder beëindigde bedrijfsactiviteiten.

(2) De cijfers in deze kolom zijn niet gecontroleerd en afgeleid uit de vergelijkende cijfers van de tussentijdse verkorte geconsolideerde financiële overzichten van 9M 2016. De bedrijfsactiviteit YXY-technologie en het resultaat van de verkoop van de bedrijfsactiviteit Pharma zijn gerapporteerd onder beëindigde bedrijfsactiviteiten.

(3) De cijfers in deze kolom zijn afgeleid uit de gecontroleerde jaarrekening van FY 2015. De bedrijfsactiviteit YXY-technologie en het resultaat van de verkoop van de bedrijfsactiviteit Pharma zijn gerapporteerd onder beëindigde bedrijfsactiviteiten.

(4) De cijfers in deze kolom zijn afgeleid uit de vergelijkende cijfers voor FY 2014 in de gecontroleerde jaarrekening van FY 2015. De bedrijfsactiviteiten YXY-technologie en Pharma zijn gerapporteerd onder beëindigde bedrijfsactiviteiten.

(5) De cijfers in deze kolom zijn afgeleid uit de gecontroleerde jaarrekening van FY 2014. De bedrijfsactiviteit YXY-technologie is gerapporteerd onder voortgezette bedrijfsactiviteiten en de bedrijfsactiviteit Pharma is gerapporteerd onder beëindigde bedrijfsactiviteiten.

(6) De cijfers in deze kolom zijn afgeleid uit de vergelijkende cijfers voor FY 2013 in de gecontroleerde jaarrekening van FY 2014. De bedrijfsactiviteit YXY-technologie is gerapporteerd onder voortgezette bedrijfsactiviteiten en de bedrijfsactiviteit Pharma is gerapporteerd onder beëindigde bedrijfsactiviteiten.

B.8	Geselecteerde belangrijke pro forma	Op 30 november 2016 richtte Avantium de Joint Venture op (met economisch effect vanaf 1 juli 2016), waarin het een minderheidsbelang heeft van 49%, hierin bracht Avantium de YXY-

	financiële informatie	technologie, de Proeffabriek en de bijbehorende octrooien en kennis onder. *Ter illustratie,[2] wanneer deze transactie had plaatsgevonden aan het begin van de negen maanden periode eindigend op 30 september 2016, dan zou dit de volgende niet gecontroleerde pro forma veranderingen in de winst- en verliesrekening en de geconsolideerde balans hebben veroorzaakt op 1 januari 2016:* - een winst van €48.8 miljoen (na aftrek van belastingen, echter, het Bedrijf verwacht voldoende fiscale compensabele verliezen te hebben) zou zijn gerealiseerd na verkrijging van de deelneming in de Joint Venture met een waarde van €55.0 miljoen minus €6.2 miljoen boekwaarde van de aan de Joint Venture overgedragen activa. De 49% deelneming in de Joint Venture is gewaardeerd op €55 miljoen op basis van de Joint Venture bijdrage van BASF van €57.2 miljoen in overeenstemming met haar belang van 51% op 30 november 2016 (de oprichtingsdatum van de Joint Venture). - op 30 november 2016 (de oprichtingsdatum van de Joint Venture) zou er geen vordering zijn van naar schatting €5.8 miljoen van de Joint Venture met betrekking tot de kosten en capex voor de periode juli 2016 - november 2016. Het geschatte bedrag van €5.8 miljoen is gebaseerd op daadwerkelijke kosten van de YXY-technologie en het uiteindelijke bedrag zal worden vastgesteld na discussies met de Joint Venture en afronding van de gecontroleerde geconsolideerde jaarrekening van de Groep per en voor het boekjaar eindigend op 31 december 2016; - een geschatte cash vergoeding zou zijn verkregen van de Joint Venture voor de overhead kosten van €1.2 miljoen en als gevolg een lager operationeel verlies; en - het verlies €5.4 miljoen voor de periode van beëindigde bedrijfsactiviteiten zou niet worden opgenomen in het verkorte geconsolideerde overzicht van het totaalresultaat van de Groep. In plaats daarvan zou er een verondersteld verlies zijn van de deelneming in de Joint Venture van €3.2 miljoen, wat neerkomt op 49% van het operationeel verlies van €6.6 miljoen (bestaande uit €5.4 miljoen verlies over de periode als gevolg van beëindigde bedrijfsactiviteiten plus de hierboven genoemde €1.2 miljoen overhead kosten in rekening gebracht door de Groep) en een daaropvolgende vermindering van de waarde van de participatie in de Joint Venture met het veronderstelde verlies van €3.2 miljoen. In de toekomst is de waardering van de deelneming in de Joint Venture, met name de IP met betrekking tot de YXY-technologie, in belangrijke mate afhankelijk van schattingen van de toekomstige cash stromen en de gewogen gemiddelde kapitaalkosten van de Joint Venture. Op dit moment verwacht de Groep de Referentiefabriek in tien jaar af te schrijven in overeenstemming met IFRS; afwaardering van materiële en immateriële vaste activa zal jaarlijks worden getoetst of in het geval van een bijzondere gebeurtenis. Een afwaarderingsverlies wordt opgenomen in de resultatenrekening van de Joint Venture wanneer de boekwaarde van de activa hoger is dan de gerealiseerde waarde. Afwaarderingen door de Joint Venture kunnen invloed hebben op de resultaten van de Groep. De prestaties van de Joint Venture en de Groep worden ook beïnvloed door vergelijkbare internationale, regionale en lokale omstandigheden, zoals de macro-economie en de regelgeving van de overheid.
B.9	Winstprognose	Niet van toepassing; het Bedrijf heeft geen winstprognose afgegeven.
B.10	Voorbehouden in de afgifte van de accountants-verklaring betreffende de historische financiële informatie	Niet van toepassing; er zijn geen voorbehouden.
B.11	Verklaring indien werkkapitaal niet toereikend is	Het Bedrijf is van mening dat de Groep over voldoende werkkapitaal beschikt voor haar huidige behoeften, dat wil zeggen, ten minste voor een periode van twaalf maanden vanaf de datum van dit Prospectus.

[2] Deze niet gecontroleerde pro forma informatie is slechts bedoeld ter illustratie. Het betreft een hypothetische situatie en geeft geen representatie van de daadwerkelijke financiële positie van de groep. Het is gestoeld op de veronderstelling dat de Joint Venture is opgericht op 1 januari 2016. Deze veronderstellingen of de daaruit resulterende pro forma financiële informatie zijn niet gecontroleerd of beoordeeld in lijn met enige accountingstandaarden.

Afdeling C – Effecten		
C.1	Type, klasse en identificatiecode van de aangeboden aandelen	De Aandelen zijn gewone aandelen in het aandelenkapitaal van het Bedrijf. Er is een aanvraag ingediend om alle Aandelen onder het symbool 'AVTX' op Euronext Amsterdam en Euronext Brussel te noteren onder ISIN-code: NL0012047823.
C.2	Valuta van de aangeboden aandelen	De Aandelen luiden in en worden verhandeld in euro's.
C.3	Aantal uitgegeven aandelen, nominale waarde per aandeel	Op de datum van dit Prospectus bedraagt het geplaatste en uitstaande kapitaal van het Bedrijf €1.318.664,99 bestaande uit één enkele categorie aandelen met een nominale waarde van €0,01 per aandeel. Alle uitgegeven aandelen zijn volledig volgestort en zijn onderworpen aan, en gecreëerd volgens, Nederlands recht. De nominale waarde van de aandelen in het kapitaal van het Bedrijf zal naar €0,10 worden verhoogd als onderdeel van de Herstructurering van het Bedrijfskapitaal.
C.4	Rechten verbonden aan de effecten	Verwijzingen naar de **Statuten** zullen hierna doelen op de statuten van het Bedrijf na de wijziging ervan vóór de Afwikkeling. Elk Aangeboden Aandeel geeft recht op het uitbrengen van één stem in de algemene vergadering van aandeelhouders van het Bedrijf (de **Algemene Vergadering**). Er zijn geen andere stemrechtbeperkingen dan dat het Bedrijf geen stemrecht heeft ten aanzien van de Aandelen die het in portefeuille houdt. De Aangeboden Aandelen zullen in aanmerking komen voor dividenden die het Bedrijf na de Afwikkelingsdatum op Aandelen kan vaststellen. Houders van Aandelen hebben een voorkeursrecht bij de uitgifte van Aandelen. Houders van Aandelen hebben geen voorkeursrecht ten aanzien van Aandelen die zijn uitgegeven ter vergoeding van een inbreng in natura of Aandelen die zijn uitgegeven aan werknemers van de Groep of van een bedrijf van de Groep. Dit voorkeursrecht geldt ook bij verlening van het recht tot inschrijving op Aandelen. Behoudens de goedkeuring van de raad van commissarissen van het bedrijf (de **Raad van Commissarissen**) is de raad van bestuur van het Bedrijf (de **Raad van Bestuur**) gemachtigd om het aan Aandeelhouders toekomende voorkeursrecht te beperken of uit te sluiten als en voor zover de Algemene Vergadering de Raad van Bestuur daartoe heeft gemachtigd, en alleen als de Raad van Bestuur op dat moment is gemachtigd om Aandelen uit te geven. Een dergelijke machtiging kan uitsluitend worden gedaan voor een periode van hooguit vijf jaar. De Algemene Vergadering heeft de Raad van Bestuur voor een periode eindigend 18 maanden na de Omzetting aangesteld als het bedrijfsorgaan dat gemachtigd is Aandelen uit te geven of het recht tot inschrijving op Aandelen te verlenen, en om het voorkeursrecht te beperken of uit te sluiten. In overeenstemming met deze aanwijzing kan de Raad van Bestuur besluiten om Aandelen uit te geven of het recht tot inschrijving op Aandelen te verlenen bestaande uit (i) maximaal 10% van het totaal aantal Aandelen dat op de Afwikkelingsdatum voor niet-gespecificeerde doeleinden is uitgegeven en in omloop gebracht, en (ii) daarnaast 10% van het totaal aantal Aandelen dat op de Afwikkelingsdatum is uitgegeven en in omloop gebracht in verband met of ter gelegenheid van fusies en overnames en strategische allianties en (iii) maximaal 10% in verband met een stimuleringsplan, een aandeelhoudersplan en/of een ander soortgelijk plan, behoudens de goedkeuring van de Raad van Commissarissen. Deze machtiging kan van tijd tot tijd via een besluit van de Algemene Vergadering worden verlengd met een periode van niet langer dan vijf jaar.
C.5	Beperkingen op de vrije overdraagbaarheid van de effecten	Volgens de Statuten gelden er geen beperkingen op de vrije overdraagbaarheid van de Aangeboden Aandelen. Het aanbieden van Aangeboden Aandelen aan personen die ingezeten of gevestigd zijn in, of burger zijn van, of een geregistreerd adres hebben in, een ander land dan Nederland of België, en de overdracht van Aangeboden Aandelen naar andere rechtsgebieden dan Nederland of België kan echter onderworpen zijn aan bepaalde regelgeving of beperkingen.
C.6	Notering en toelating tot de handel	Er is een aanvraag ingediend om alle Aandelen onder het symbool 'AVTX' op Euronext Amsterdam en Euronext Brussel te noteren. Behoudens verkorting of verlenging van het tijdschema voor de Aanbieding zal naar verwachting op of rond 15 maart 2017 worden begonnen met het op basis van het beginsel 'as-if-and-when-issued-and/or-delivered' verhandelen van de Aandelen, op voorwaarde dat de Aanbiedingsperiode ten minste zes werkdagen bedraagt.

C.7	Dividend-beleid	Het Bedrijf verwacht niet dat het in de nabije toekomst dividend uitbetaalt.
	Afdeling D – Risico's	
D.1	Voornaamste risico's die specifiek zijn voor Groep en de sector	Hieronder volgt een selectie van de kernrisico's die betrekking hebben op de sector, de bedrijfsonderdelen en de activiteiten van de Groep, het verkrijgen van een beursnotering voor het Bedrijf en de Aanbieding. Bij het samenstellen van deze selectie heeft de Groep rekening gehouden met omstandigheden als de kans op optreden van het risico op basis van de huidige stand van zaken en de eventuele gevolgen die optreden van het risico zou kunnen hebben voor de bedrijfsactiviteiten, financiële toestand en de resultaten van de bedrijfsactiviteiten. Beleggers moeten eerst alle risicofactoren lezen, begrijpen en overwegen die zijn opgenomen in hoofdstuk 4 'Risicofactoren', dat begint op bladzijde 52 van dit Prospectus, voordat ze een beleggingsbesluit nemen om te investeren in de Aangeboden Aandelen. **Risico's met betrekking tot de activiteiten van de Groep en de sector** • De Groep boekte verliezen en had een negatieve operationele kasstroom, waardoor zij nu een geaccumuleerd tekort heeft. De Groep verwacht dat zij in de nabije toekomst verliezen blijft boeken en de Groep zal misschien nooit winstgevend worden of blijven; • Het vermogen van de Groep om winst te genereren uit de YXY-technologie hangt voornamelijk af van het vermogen van de Joint Venture om deze technologie succesvol commercieel te exploiteren; • De Groep is misschien niet in staat haar O&O-projecten succesvol te ontwikkelen binnen de bedrijfsactiviteit Renewable Chemistries, wat nadelig kan zijn voor de activiteiten, financiële toestand, resultaten van de activiteiten en prognoses van de Groep; • Om haar O&O-projecten in de bedrijfsactiviteit Renewable Chemistries verder te kunnen ontwikkelen en commercieel te kunnen exploiteren is misschien een samenwerking met partners noodzakelijk. Als de Groep voor haar O&O-projecten binnen de bedrijfsactiviteit Renewable Chemistries geen gezamenlijke ontwikkelingsovereenkomsten met partners kan afsluiten, aanhouden en uitvoeren, is zij misschien niet in staat om deze projecten verder te ontwikkelen en commercieel te exploiteren; • De Groep kan binnen haar bedrijfsactiviteit Renewable Chemistries voor uitdagingen komen te staan bij de opschaling van de technologieën, wat verdere ontwikkeling en commerciële exploitatie van de projecten kan vertragen of tegenhouden; • De opbrengsten van de Groep uit haar bedrijfsactiviteit Catalysis worden grotendeels gegenereerd door een klein aantal grote klanten; en • Als het de Groep niet lukt om haar bedrijfseigen technologie, producten en processen, informatie, handelsgeheimen en kennis afdoende te beschermen, kan dit een wezenlijk nadelig effect op haar activiteiten hebben. **Risico's met betrekking tot de Joint Venture** • Het besluit over het doorgaan van de bouw van de Referentiefabriek hangt van bepaalde voorwaarden af, en zowel Avantium als BASF kunnen hun uittredingsrecht uitoefenen, met als gevolg ontbinding van de Joint Venture, voordat een positief besluit over de bouw van de Referentiefabriek is genomen. Er kan geen enkele garantie worden verstrekt over het op tijd of binnen de begroting voltooien van de Referentiefabriek, of zelfs over het doorgaan van de bouw ervan. • De Groep heeft geen zeggenschap over de Joint Venture, en de belangen van BASF kunnen tegengesteld zijn aan die van de Groep, wat negatieve gevolgen kan hebben voor de waarde van de Joint Venture; en • Het commerciële succes van de Joint Venture zal afhangen van de acceptatie door de markt van PEF en PEF-producten en het vermogen van de Joint Venture om FDCA, PEF en Licenties te verkopen, wat mogelijk pas duidelijk wordt als de Referentiefabriek operationeel is. en • De YXY-technologie presteert mogelijk niet volgens verwachting op de geplande schaal in de Referentiefabriek, en in de Referentiefabriek vervaardigd FDCA of door derden vervaardigd PEF voldoet mogelijk niet aan de vereiste normen of specificaties voor de productkwaliteit. • Voor het oplossen van geschillen of vorderingen door derden in verband met schending van intellectuele-eigendomsrechten kan aanzienlijk veel tijd en geld nodig

		zijn en deze procedures kunnen leiden tot aansprakelijkheid voor schade. Een nadelige uitspraak in een dergelijke procedure kan ertoe leiden dat de intellectuele-eigendomsrechten van de Joint Venture worden beperkt, en dit kan commerciële exploitatie van de YXY-technologie verhinderen.
D.3	Voornaamste risico's met betrekking tot de aandelen en de aanbieding	**Risico's met betrekking tot de Aanbieding en de Aandelen** • Na de Aanbieding zijn de grootste Aandeelhouders van de Groep in staat om aanzienlijke invloed uit te oefenen op het Bedrijf, en de belangen van deze Aandeelhouders kunnen verschillen van de belangen van de overige Aandeelhouders van het Bedrijf. • Er bestaat het risico dat zich voor de Aandelen geen actieve en liquide markt ontwikkelt, en de prijs van de Aandelen kan onstabiel worden; • Schommelingen in de door de Joint Venture voor de Groep gegenereerde opbrengsten en andere baten kunnen wezenlijke gevolgen hebben en ertoe leiden dat de aandelenprijs van de Groep onstabiel wordt; en • Het Bedrijf is niet van plan in de nabije toekomst dividend uit te betalen en het is onzeker of het in de nabije toekomst over het vermogen zal beschikken om dividend uit te betalen.
	Afdeling E – De Aanbieding	
E.1	Netto opbrengst en geraamde kosten	Het Bedrijf schat dat de bruto-opbrengst van de Aanbieding voor het Bedrijf ongeveer €90 miljoen zal bedragen, uitgaande van een uitgifte van 8.133.168 Nieuwe Aangeboden Aandelen (uitgezonderd de Verhogingsaandelen en de Overtoewijzingsaandelen, beide zoals hieronder gedefinieerd). De kosten van het Bedrijf voor de Aanbieding bedragen naar verwachting in totaal ongeveer €8 miljoen (inclusief de geschatte uitgaven voor de Aanbieding en volledige uitbetaling van alle honoraria en provisies aan de Underwriters, inclusief het vrijwillige honorarium). De minimumnetto-opbrengst van de Aanbieding voor het Bedrijf moet ten minste €65 miljoen bedragen. Avantium heeft ontvangen onvoorwaardelijke en onherroepelijke toezeggingen tot inschrijving op Aangeboden Aandelen voor een bedrag van €20 miljoen en sterke intenties tot inschrijving op Aangeboden Aandelen voor een bedrag van €44 miljoen (een netto totaalbedrag van €56 miljoen).
E.2a	Redenen voor de aanbieding en bestemming van de opbrengst	Het Bedrijf verwacht momenteel de netto-opbrengsten van de Aanbieding als volgt te gebruiken: (i) ongeveer €65-75 miljoen van de netto-opbrengsten zal worden gebruikt voor financiering van de Joint Venture om deze in staat te stellen de Referentiefabriek te bouwen en operationeel te maken voor commerciële exploitatie van de YXY-technologie. (ii) ongeveer €15-20 miljoen van de netto-opbrengsten zal worden gebruikt om proeffabrieken te bouwen voor de twee verst gevorderde ontwikkelingsprojecten onder de bedrijfsactiviteit Renewable Chemistries, project Zambezi en project Mekong, en om deze fabrieken operationeel te maken tot en met commercieel niveau (ongeveer €7.5 -10 miljoen per project); en (iii) het resterende bedrag zal worden gebruikt voor andere projecten binnen Renewable Chemistries (waaronder project Volta) en algemene bedrijfsdoeleinden in overeenstemming met de activiteiten en strategie van de Groep, zoals werkkapitaal en (her)financieringsbehoeften, algemene en administratieve uitgaven en aanvullende kosten voortvloeiend uit haar status als beursgenoteerd bedrijf. Als de netto-opbrengsten van de Aanbieding €65 miljoen bedragen, verwacht het Bedrijf het volledige bedrag te gebruiken voor financiering van de Joint Venture. Als de Referentiefabriek niet wordt gebouwd in overeenstemming met de voorwaarden van de Joint Venture-overeenkomst, zal de Raad van Bestuur (*Management Board*), na goedkeuring van de Raad van Commissarissen en de Algemene Vergadering, besluiten over een alternatief gebruik van de netto-opbrengsten die hierboven onder (i) worden bedoeld.
E.3	Voorwaarden van de aanbieding	**Aangeboden Aandelen** Het Bedrijf biedt maximaal 8.133.168 Nieuwe Aangeboden Aandelen aan (uitgezonderd de Verhogingsaandelen en de Overtoewijzingsaandelen) om ongeveer € 90 miljoen aan bruto-opbrengsten te genereren. De minimumnetto-opbrengst van de Aanbieding voor het Bedrijf moet ten minste €65 miljoen bedragen. De Stichting Avantium biedt namens de CEO, CFO en CTO van het Bedrijf 48.650 Aandelen aan (de **Bestuursaandelen**), die 0.6% van de Aangeboden Aandelen vertegenwoordigen. Zij zullen via de verkoop van de Bestuursaandelen opbrengsten ontvangen als terugbetaling of compensatie voor de financiële en gerelateerde kosten die zij in 2007 maakten in verband met hun investering in deze Aandelen. De Aanbieding bestaat uit: (i) een openbaar aanbod in Nederland en België aan institutionele

		en particuliere beleggers en (ii) onderhandse plaatsingen bij bepaalde institutionele beleggers in verschillende andere rechtsgebieden. De Aanbieding wordt gedaan buiten de Verenigde Staten van Amerika (de **Verenigde Staten** of de **VS**) en de Aangeboden Aandelen worden uitsluitend aangeboden en verkocht in offshore transacties buiten de Verenigde Staten in overeenstemming met Regulation S (**Regulation S**) van de Amerikaanse Securities Act van 1933, zoals gewijzigd (de **Amerikaanse Securities Act**). De Aangeboden Aandelen zijn niet geregistreerd en zullen niet worden geregistreerd onder de Amerikaanse Securities Act. De Aangeboden Aandelen worden uitsluitend aangeboden in rechtsgebieden waarin, en uitsluitend aan personen aan wie, het aanbieden van de Aangeboden Aandelen wettig gezien is toegestaan. **Particuliere toewijzing** Op voorwaarde dat er genoeg vraag is, wordt beoogd om ten minste 10% van de Aangeboden Aandelen toe te wijzen aan particuliere beleggers in Nederland en België. Het aandeel van de Aangeboden Aandelen dat aan particuliere beleggers in Nederland en België wordt toegewezen, kan worden vergroot of verkleind als het aantal door hen ingediende aanvragen respectievelijk meer of minder is dan 10% van de Aangeboden Aandelen. Particuliere beleggers in België en Nederland zullen wat betreft de toewijzing in geval van overinschrijving bij de Aanbieding gelijkwaardig worden behandeld. **Overtoewijzingsoptie** Het Bedrijf zal naar verwachting binnen 30 dagen na de Eerste Handelsdag de Underwriters een optie verlenen (de **Overtoewijzingsoptie**), uit te voeren door ING, als stabilisatieagent (de **Stabilisatieagent**) voor en namens de Underwriters, op basis waarvan de Stabilisatieagent voor en namens de Underwriters het Bedrijf mag verzoeken tegen de Biedprijs maximaal 1.219.975 extra Nieuwe Aangeboden Aandelen uit te geven (of maximaal 1.402.971 extra Nieuwe Aangeboden Aandelen in geval van volledige uitoefening van de Verhogingsoptie), die maximaal 15% uitmaken van het totaal aantal Nieuwe Aangeboden Aandelen (de **Overtoewijzingsaandelen**), om shortposities te dekken die voortvloeien uit overtoewijzingen ten gevolge van de Aanbieding of stabilisatietransacties, indien van toepassing. **Aanbiedingsperiode** De Aanbieding zal plaatsvinden tussen 09:00 Midden-Europese Tijd (**MET**) op 6 maart 2017 en 17:30 MET op 13 maart 2017 (de **Aanbiedingsperiode**), behoudens verkorting of verlenging van het tijdschema voor de Aanbieding, op voorwaarde dat de Aanbiedingsperiode ten minste zes werkdagen bedraagt. **Biedprijs en aantal Aangeboden Aandelen** De biedprijs per Aangeboden Aandeel is € 11.00 (de **Biedprijs**). Het bedrijf kan, na onderlinge overeenstemming met de Joint Global Coordinators, op enig tijdstip vóór de toewijzing van de Aangeboden Aandelen ertoe besluiten om, in geval van overinschrijving bij de Aanbieding, om het totaal aantal Nieuwe Aangeboden Aandelen met maximaal 15% te verhogen tot maximaal 9.353.143 Nieuwe Aangeboden Aandelen (de **Verhogingsoptie**, en alle Nieuwe Aangeboden Aandelen die op basis van de uitoefening van de Verhogingsoptie worden aangeboden: de **Verhogingsaandelen**). Een dergelijke wijziging wordt bekend gemaakt in een persbericht dat ook op de website van het Bedrijf zal verschijnen. Er wordt een aanvulling op dit Prospectus gepubliceerd als de vastgestelde Biedprijs wijzigt. Als op de laatste dag van de Aanbiedingsperiode de Biedprijs wordt verhoogd, dan wordt de Aanbiedingsperiode met ten minste twee werkdagen verlengd. Als op de dag vóór de laatste dag van de Aanbiedingsperiode de Biedprijs wordt verhoogd, dan wordt de Aanbiedingsperiode met ten minste één werkdag verlengd. Beleggers die vóór publicatie van de aanvulling al hebben ingestemd met de aankoop van of inschrijving op de Aangeboden Aandelen, hebben het recht om binnen twee werkdagen na publicatie van de aanvulling hun aanvaarding in te trekken. Het exacte aantal Aangeboden Aandelen worden na beëindiging van de Aanbiedingsperiode in onderlinge overeenstemming met de Joint Global Coordinators door het Bedrijf vastgesteld, na rekening te hebben gehouden met de in hoofdstuk 16 'De Aanbieding', afdeling 16.4 "Het aantal Aangeboden Aandelen', genoemde voorwaarden. Het exacte aantal Aangeboden Aandelen en het maximumaantal Overtoewijzingsaandelen worden vastgelegd in een aanbiedingsverklaring die uiterlijk op de eerste handelsdag na beëindiging van de Aanbiedingsperiode via een persbericht zal worden gepubliceerd en ook op de website van het Bedrijf zal verschijnen (de **Aanbiedingsverklaring**).

		Inschrijvingen Particuliere beleggers mogen op elk tijdstip vóór beëindiging van de Aanbiedingsperiode (indien van toepassing zoals verkort of verlengd) hun aanvraag wijzigen of annuleren bij de financiële tussenpersoon waar ze hun oorspronkelijke aanvraag hebben ingediend. **Toewijzing** De toewijzing van de Aangeboden Aandelen vindt naar verwachting plaats na beëindiging van de Aanbiedingsperiode, op of rond 14 maart 2017, behoudens verkorting of verlenging van het tijdschema voor de Aanbieding, op voorwaarde dat de Aanbiedingsperiode ten minste zes werkdagen bedraagt. De toewijzing van de Aangeboden Aandelen aan beleggers zal door het Bedrijf worden bepaald, in onderlinge overeenstemming met de Joint Global Coordinators, op basis van de respectieve vraag onder zowel particuliere beleggers als institutionele beleggers en op basis van de kwantitatieve en, uitsluitend voor institutionele beleggers, de kwalitatieve analyse van het orderboek, daarbij rekening houdend met de Aangeboden Aandelen die moeten worden toegewezen aan de Hoeksteenbeleggers (zoals hieronder gedefinieerd). Iedere financiële tussenpersoon brengt zijn eigen (particuliere of institutionele) klanten op de hoogte van hun toewijzing in overeenstemming met zijn gebruikelijke procedures. De Hoeksteenbeleggers zullen de volledige bedragen toegewezen krijgen voor een totaalbedrag van €64 miljoen) (zie onder “Hoeksteenbeleggers” hieronder). Er is geen maximum- of minimumaantal Aangeboden Aandelen waarop potentiële beleggers mogen intekenen en meervoudige (aanvragen voor) inschrijvingen zijn toegestaan. In geval van overinschrijving bij de Aanbieding kunnen beleggers minder Aangeboden Aandelen toegewezen krijgen dan het aantal waarop ze hadden ingetekend. Ondanks het bovenstaande bestaat de intentie om ten minste 10% van de Aangeboden Aandelen toe te wijzen aan particuliere beleggers in Nederland en België (zie hierboven onder 'Particuliere toewijzing'). Het aandeel van de Aangeboden Aandelen dat aan particuliere beleggers in Nederland en België wordt toegewezen, kan worden vergroot of verkleind als het aantal door hen ingediende aanvragen respectievelijk meer of minder is dan 10% van de Aangeboden Aandelen. Particuliere beleggers in België en Nederland zullen wat betreft de toewijzing in geval van overinschrijving bij de Aanbieding gelijkwaardig worden behandeld. **Uitbetaling** Uitbetaling (in euro) zal naar verwachting plaatsvinden op de Afwikkelingsdatum. Eventuele belastingen en uitgaven zijn voor rekening van de belegger. Beleggers moeten de Biedprijs op of vóór de Afwikkelingsdatum (of nog eerder, in geval van vervroegde sluiting van de Aanbieding en eropvolgende versnelde prijsstelling, toewijzing, begin van het verhandelen en Afwikkeling) volledig betalen in onmiddellijk beschikbare fondsen in euro. **Levering van de Aandelen** De Aandelen worden geleverd in girale vorm via de faciliteiten van het Nederlands Centraal Instituut voor Giraal Effectenverkeer B.V. (**Euroclear Nederland**) in overeenstemming met de normale procedures van Euroclear Nederland die van toepassing zijn op aandelen, en tegen volledige betaling in onmiddellijk beschikbare fondsen voor de Aangeboden Aandelen. Beëindiging van de Aanbieding hoeft niet plaats te vinden op de Afwikkelingsdatum, of helemaal niet, als bepaalde voorwaarden of gebeurtenissen die in de Underwriting-overeenkomst vermeld staan, niet worden nageleefd, worden verzaakt of zich niet voordoen op of vóór de betrokken datum. Tot dergelijke voorwaarden behoren (i) ontvangst van de gebruikelijke documentatie en naleving van de gebruikelijke voorwaarden, (ii) bevestiging dat de Aangeboden Aandelen voor notering op Euronext zijn toegelaten, en (iii) voltooiing van de Omzetting en de Herstructurering van het Bedrijfskapitaal, alsook bepaalde andere voorwaarden. Als de Afwikkeling niet zoals gepland op de Afwikkelingsdatum plaatsvindt, of helemaal niet, kan de Aanbieding worden ingetrokken, en in dat geval zullen alle inschrijvingen op Aangeboden Aandelen buiten beschouwing worden gelaten, alle uitgevoerde toewijzingen als niet-uitgevoerd worden beschouwd en alle verrichte inschrijvingsbetalingen worden teruggestort zonder rente of andere compensatie. Elke verhandeling van Aangeboden Aandelen die vóór de Afwikkeling plaatsvindt, is uitsluitend voor risico van de betrokken partijen. **Banken die betrokken zijn bij de Aanbieding** • Joint Global Coordinators: ING en KBC Securities treden op als joint global coordinator bij de Aanbieding (samen de **Joint Global Coordinators**); • Joint Bookrunners: ING, KBC Securities en Rabobank treden op als joint bookrunner bij de Aanbieding (samen de **Joint Bookrunners**); • Co-Lead Manager: Oddo et Cie S.C.A. treedt op als co-lead manager bij de Aanbieding (de **Co-Lead Manager**); • Underwriters: de Joint Bookrunners en de Co-Lead Manager treden op als

		underwriters bij de Aanbieding (de **Underwriters**); • Noterings- en Betalingsagent: ING treedt op als de Noterings- en Betalingsagent voor de Aandelen op Euronext; en • Stabilisatieagent: ING treedt op als Stabilisatieagent met betrekking tot de Aandelen op Euronext. **Hoeksteenbeleggers** Het Bedrijf heeft (i) onvoorwaardelijke en onherroepelijke toezeggingen tot inschrijving op Aangeboden Aandelen ontvangen van alle CLA-kredietverstrekkers voor een gezamenlijk bedrag van €20 miljoen en (ii) sterke intenties tot deelname aan de Aanbieding en tot inschrijving op Aangeboden Aandelen ontvangen van bepaalde andere beleggers voor een gezamenlijk bedrag van €44 miljoen (samen: de **Hoeksteenbeleggers**), waaronder: (i) Stichting APG Developed Markets Equity Pool voor een bedrag van €30 miljoen, (ii) RobecoSAM AG en Optiverder B.V. beiden voor een bedrag van €5 miljoen en (iii) twee andere investeerders beiden voor een bedrag €2 miljoen. De Hoeksteenbeleggers zullen de volledige bedragen toegewezen krijgen voor een totaalbedrag van €64 miljoen). Elke Hoeksteenbelegger die zich inschrijft voor de Aangeboden Aandelen voor ten minste €5.000.000 krijgt één warrant voor elke vier Aangeboden Aandelen waarvoor is ingeschreven. Elke warrant geeft vervolgens recht op één Aandeel tegen een uitoefenprijs van 125% van de Biedprijs, met inachtneming van gebruikelijke anti-verwateringsclausules (de **Warrants**). De Hoeksteenbeleggers ontvangen in totaal 1.249.998 Warrants, ervan uitgaande dat alle toezeggingen en sterke intenties leiden tot allocatie van Aangeboden Aandelen bij Hoeksteenbeleggers. De Warrants hebben een looptijd van vijf jaar na de Afwikkeldatum en kunnen worden uitgeoefend na twee jaar. **Underwriting-overeenkomst – Opschortende voorwaarden** Het Bedrijf, de Stichting Avantium en de Underwriters gaan met elkaar op de datum van de prijsstelling en de toewijzing de Underwriting-overeenkomst met betrekking tot de Aanbieding aan. De verplichtingen van de Underwriters in het kader van de Underwriting-overeenkomst zijn onderworpen aan: (i) de prestaties van de Overeenkomst tot Uitlening van de Aandelen, (ii) het niet optreden van wezenlijke negatieve veranderingen in de activiteiten, het aandelenkapitaal, de financiële positie en de operationele prestaties van de Groep, (iii) het op of vóór de Afwikkelingsdatum ontvangen van adviezen van juridische raadgevers over bepaalde juridische kwesties met betrekking tot, onder andere, het Bedrijf, dit Prospectus en de Aangeboden Aandelen, (iv) het niet ontstaan van omstandigheden die een aanvulling op dit Prospectus vereisen, (v) de tenuitvoerlegging van documenten met betrekking tot de Aanbieding (bv. de Overeenkomst tot Uitlening van de Aandelen, lock-upovereenkomsten en verbintenisverklaringen van beleggers) en het volledig van kracht en rechtsgeldig zijn van dergelijke documenten, (vi) de toelating van de Aandelen op Euronext Amsterdam en Euronext Brussel om te worden genoteerd en verhandeld, (vii) het voltooien van de Omzetting en de Herstructurering van het Bedrijfskapitaal en (viii) bepaalde andere gebruikelijke afsluitingsvoorwaarden, inclusief, onder andere, de nauwkeurigheid van de door het Bedrijf en de Stichting Avantium verstrekte warranten in overeenstemming met de Underwriting-overeenkomst, het verkrijgen van alle relevante bedrijfsgoedkeuringen en naleving door het Bedrijf van zijn verplichtingen in het kader van de Underwriting-overeenkomst en de richtlijnen voor publicatie. De Joint Global Coordinators hebben het recht af te zien van naleving van dergelijke voorwaarden of enig gedeelte ervan. **Toepasselijk recht en bevoegde rechtbanken** Op dit Prospectus en de Aanbieding is het Nederlands recht van toepassing. Alle geschillen die uit dit Prospectus en de Aanbieding voortvloeien, zullen onderworpen zijn aan de niet-exclusieve bevoegdheid van de rechtbanken in Amsterdam, Nederland.
E.4	Belangen die materieel zijn voor de aanbieding (met inbegrip van tegenstrijdige belangen)	Bepaalde Underwriters, de Noterings- en Betalingsagent en/of hun respectieve gelieerde partijen kunnen in de toekomst van tijd tot tijd commerciële bankactiviteiten, investment banking, financiële adviesdiensten en aanverwante activiteiten uitvoeren tijdens de normale uitoefening van hun werkzaamheden met het Bedrijf of daaraan gelieerde partijen, waarvoor zij gebruikelijke vergoedingen en provisies hebben en/of in de toekomst kunnen ontvangen. Bovendien kunnen de Underwriters en/of hun respectieve gelieerde partijen in de toekomst tijdens de normale uitvoering van hun werkzaamheden effecten van het Bedrijf houden voor investeringsdoeleinden. Zie hoofdstuk 17 'Verspreidingsplan', afdeling 17.3 'Potentiële belangenconflicten'. Door hun hoedanigheid, zoals hierboven omschreven, kunnen de Underwriters, de Noterings- en Betalingsagent en hun respectieve gelieerde partijen belangen hebben die niet overeenstemmen met, of tegengesteld zijn aan de belangen van (potentiële) beleggers en de belangen van de Groep. ING Participaties, dat indirect wordt gecontroleerd door ING, houdt ten tijde van dit Prospectus 13,8% van de Aandelen en blijft naar verwachting een van de belangrijkste Aandeelhouders

		na de Toelating, waardoor het een indirect economisch belang heeft bij een succesvol verloop van de Aanbieding. Zodoende kan ING Participaties belangen hebben die niet overeenstemmen met, of tegengesteld zijn aan de belangen van beleggers. Hiertoe heeft ING procedures ingesteld, zoals Chinese wall-procedures op basis van zijn regels en voorschriften en intern beleid, ter voorkoming van informatie-uitwisseling en tegenstrijdige belangen tussen de bedrijven, gelieerde partijen, directeuren en werknemers van de groep die betrokken zijn bij de activiteiten in merchant banking en vermogensbeheer ervan. Bovendien zullen de CLA-kredietverstrekkers hun Converteerbare Leningen omzetten in Aandelen tegen een conversieprijs van 75% van de Biedprijs ten tijde van de Aanbieding. Het economische belang van de CLA-kredietverstrekkers hangt onder meer af van het succesvol verlopen van de Aanbieding en de toekomstige handelsprijs van de Aandelen. Zodoende kunnen de CLA-kredietverstrekkers belangen hebben die niet overeenkomen met, of tegengesteld zijn aan, de belangen van het Bedrijf.
E.5	Persoon of entiteit die aanbiedt de aangeboden aandelen te verkopen en lock-up regelingen	In overeenstemming met afzonderlijke lock-upverklaringen zijn de bestaande Aandeelhouders, de CLA-kredietverstrekkers en de Stichting Avantium met de Joint Global Coordinators overeengekomen dat zij, behoudens de gebruikelijke uitzonderingen, voor een periode van 180 dagen na de Afwikkelingsdatum niet zullen overgaan tot het direct of indirect uitgeven, aanbieden, in pand geven, verkopen van of het afsluiten van verkoopcontracten voor, het verkopen van koopopties of koopcontracten voor, het kopen van verkoopopties of verkoopcontracten voor, het verlenen van optierechten of warranten voor het kopen, uitlenen of anderszins overdragen of van de hand doen van Aandelen of effecten die uitwisselbaar zijn voor, converteerbaar naar of uitvoerbaar voor Aandelen, of het afsluiten van enige andere overeenkomst om welke economische gevolgen dan ook van de eigendom van de Aandelen ten dele of volledig over te dragen, ongeacht of een dergelijke transactie wordt afgewikkeld door de levering van de Aandelen of andere effecten, contant geld of anderszins (de Hard Lock-upperiode). Voor een periode van 180 dagen na de Hard Lock-upperiode zullen de bestaande Aandeelhouders, behoudens de gebruikelijke uitzonderingen, niet overgaan tot het bovenstaande zonder voorafgaande goedkeuring van de Joint Global Coordinators. Deze lock-upregeling houdt verband met de Aandelen en koopopties die ten tijde van dit Prospectus worden gehouden door alle bestaande Aandeelhouders en de Stichting Avantium, en de Aandelen die direct na de Afwikkeling in bezit van de CLA-kredietverstrekkers zullen komen na de conversie van de Converteerbare Leningen. 15.839.879 Aandelen en 1.230.044 koopopties zullen onder de lock-upregeling vallen. De gebruikelijke uitzonderingen hebben betrekking op de verkoop van Bestuursaandelen bij de Aanbieding, het afsluiten van de Overeenkomst tot Uitlening van de Aandelen, alle overdrachten van Aandelen na de acceptatie van een openbaar overnamebod, alle overdrachten van Aandelen naar dochterondernemingen van Aandeelhouders en de verkoop van de Aandelen in overeenstemming met alle zekerheidsrechten die gelden op de datum van de Underwriting-overeenkomst of een gecoördineerde verkoop. Op de datum van dit Prospectus waren volgens het Aandeelhoudersregister geen van de Aandelen met vruchtgebruik bezwaard. Het Bedrijf verbindt zich wat betreft de Aanbieding tot een standstillperiode met betrekking tot zijn effecten, die tot 365 dagen na de Afwikkelingsdatum zal duren en waarin het de uitgifte, uitlening, aanbieding en verkoop van zijn effecten beperkt, anders dan met voorafgaande schriftelijke toestemming van de Underwriters, behoudens de gebruikelijke uitzonderingen, *onder meer* in verband met de uitgifte of verkoop van Aangeboden Aandelen, de Herstructurering van het Bedrijfskapitaal of de verlening of uitoefening van opties en de uitgifte van Aandelen in overeenstemming met stimuleringsregelingen voor werknemers.
E.6	Verwatering	De stembelangen van de huidige houders van Aandelen zullen door de uitgifte van de Nieuwe Aangeboden Aandelen verwateren. De maximale verwatering voor deze houders van Aandelen zou volgens de uitgifte van de Nieuwe Aangeboden Aandelen 51% moeten zijn, na conversie van de Converteerbare Leningen en uitgaande van een uitgifte van 10,756,114 Nieuwe Aangeboden Aandelen (met inbegrip van de Verhogingsaandelen en de Overtoewijzingsaandelen) en zonder deelname van bestaande Aandeelhouders aan de Aanbieding. De maximale verwatering voor deze houders van Aandelen neemt met 53% toe indien alle Warrants worden uitgeoefend.
E.7	Geraamde kosten die bij beleggers in rekening worden gebracht door de vennootschap	Niet van toepassing; het Bedrijf zal beleggers geen kosten in rekening brengen voor de Aanbieding.

3 RÉSUMÉ

The French translation of the summary below has not been part of the approval process of this Prospectus by the AFM. *La traduction française du résumé ci-dessous n'a pas été soumise au processus d'approbation de l'AFM.* *Ce chapitre contient une traduction en français du prospectus du 3 mars 2017 (Le Prospectus). En cas de divergence possible dans l'interprétation des concepts, la version en anglais du présent Prospectus prévaudra.*
Les résumés se composent d'exigences en matière d'informations à fournir appelés « Éléments ». Ces Eléments sont numérotés des Sections A à E (A.1 à E.7). *Le présent résumé contient l'ensemble des Éléments devant être inclus dans un résumé pour ce type de titres et d'émetteur. Dans la mesure où certains Éléments ne sont pas requis, des sauts dans la numérotation des Éléments présentés peuvent être constatés.* *Quand bien même un Élément pourrait devoir être inséré dans le résumé en raison du type de titres et d'émetteur, il est possible qu'aucune information pertinente ne puisse être fournie eu égard à cet Élément. Dans ce cas, une brève description de l'Élément concerné est insérée dans le résumé, accompagnée de la mention « Sans Objet ».*

	Section A – Introduction et avertissements	
A.1	Introduction et avertissements	Le présent résumé doit être lu comme une introduction au présent prospectus (le présent **Prospectus**) relatif à la première offre au public d'actions ordinaires d'une valeur nominale de 0,10 euro chacune (l'**Offre**) par Avantium N.V. (la **Société** ou **Avantium**). La Société offre un nombre maximum de 10,756,114 Actions nouvellement émises (les **Actions nouvelles émises dans le cadre de l'Offre** qui, sauf indication contraire du contexte, comprennent les Actions découlant de l'exercice de l'option d'accroissement et les Actions découlant de l'option de surallocation, ainsi que définies ci-après). Stichting Administratiekantoor Avantium (la **Fondation Avantium**) offre les Actions (les **Actions de la direction**, qui conjointement avec les Actions nouvelles émises dans le cadre de l'Offre, constituent les **Actions offertes**) au nom du directeur général, du directeur financier et du directeur technique (les **Directeurs**). Une demande de cotation et d'admission de toutes les actions ordinaires émises de la Société (les **Actions**) a été introduite auprès de la bourse d'Euronext Amsterdam, un marché réglementé d'Euronext Amsterdam N.V. (**Euronext Amsterdam**) et d'Euronext Bruxelles, un marché réglementé d'Euronext Brussels NV/SA (**Euronext Bruxelles**, et conjointement avec Euronext Amsterdam, **Euronext**) (l'**Admission**). Toute décision d'investir dans les Actions offertes doit être fondée sur l'examen de l'ensemble du présent Prospectus par l'investisseur. Lorsqu'une action concernant l'information contenue dans le présent Prospectus est intentée devant un tribunal, l'investisseur plaignant peut, selon la législation nationale des États membres de l'Espace économique européen (les **États (membres**) avoir à supporter les frais de traduction du présent Prospectus avant le début de la procédure judiciaire. Une responsabilité civile peut uniquement être attribuée aux personnes qui ont présenté le résumé, y compris sa traduction, mais uniquement si le contenu du résumé est trompeur, inexact ou contradictoire par rapport aux autres parties du présent Prospectus ou lorsque sa lecture conjointe avec les autres parties du Prospectus n'offre pas les informations fondamentales dont les investisseurs ont besoin pour décider d'investir ou non dans les Actions offertes.
A.2	Consentement	Sans objet ; les Actions offertes ne feront l'objet d'aucune revente ultérieure ni d'aucun placement final via des intermédiaires financiers.
	Section B – Emetteur	
B.1	Raison sociale et nom commercial de l'émetteur	Avantium N.V. (qui, à la date du présent Prospectus, est encore une société privée à responsabilité limitée (*besloten vennootschap met beperkte aansprakelijkheid*) dénommée Avantium Holding B.V.) sera normalement convertie en société anonyme (*naamloze vennootschap*) avant le Règlement (défini ci-après) et la raison sociale de la Société deviendra ensuite Avantium N.V.
B.2	Siège social et forme juridique de l'émetteur, législation régissant ses activités ainsi que son pays	La Société revêt la forme d'une société privée à responsabilité limitée (*besloten vennootschap met beperkte aansprakelijkheid*) de droit néerlandais. Avant le Règlement (défini ci-après), la Société devrait prendre la forme d'une société anonyme (*naamloze vennootschap*) (la **Conversion**). Le siège social de la Société est sis à Amsterdam, Pays-Bas.

	d'origine	
B.3	La nature des opérations actuelles d'émetteur et de ses principales activités	La Société, en ce compris ses filiales (le **Groupe**), est une société de technologie chimique de premier plan, mettant au point et commercialisant des solutions innovantes dans le domaine de la chimie renouvelable qui sont destinées à se substituer aux substances chimiques et aux matériaux fossiles. Avantium souhaite développer ses propres technologies chimiques et procédés de fabrication révolutionnaires qui permettront de convertir des matières de base biologiques en produits durables, hautement performants et rentables en tandem avec ses partenaires du monde entier. Par ailleurs, Avantium offre des services et systèmes de R&D en catalyse avancée à des sociétés renommées des secteurs de la chimie, de la raffinerie et de l'énergie. La Coentreprise (définie ci-après) avec BASF Nederland B.V. (**BASF**) n'entrera pas dans le cadre de la consolidation de la Société et sera donc exclue du Groupe. Les divisions du Groupe comprennent (i) la « Technologie YXY » qui a conduit à la création de la Coentreprise (définie ci-après), (ii) les « Chimies Renouvelables » et (iii) la « Catalyse ». Au cours de la période allant de 2013 à 2015, la division de la Technologie YXY a constaté un chiffre d'affaires de 2,9 millions d'euros. Durant la même période, les programmes de développement de la division Chimies Renouvelables n'ont généré aucun chiffre d'affaires, tandis qu'Avantium a dégagé 31 millions d'euros de recettes au sein de la division Catalyse. Le 30 Novembre 2016, Avantium a établi une coentreprise avec BASF, Synvina C.V., dans laquelle la Société détient une participation minoritaire de 49 % afin de commercialiser la Technologie YXY (la **Coentreprise**), à laquelle Avantium a apporté la Technologie YXY, l'installation pilote située à Geleen qui est opérationnelle depuis 2011 (l'**Installation pilote**), ainsi que les brevets, le savoir-faire et les employés concernés. La Coentreprise envisage de construire et d'exploiter la première usine à l'échelle commerciale pour la production de FDCA (l'**Usine de référence**). La construction de l'Usine de référence devrait démarrer d'ici la fin 2018, et les ventes de FDCA et polyéthylène-furanoate (PEF), en 2021. La Coentreprise a l'intention d'accorder ultérieurement en licence la Technologie YXY à BASF et d'autres tiers afin de porter la production du FDCA et du PEF à l'échelle mondiale et industrielle dès 2021. Le FDCA est un constituant essentiel qui pourrait intervenir pour produire des polyesters, par exemple le PEF, un polymère entièrement biologique, qui peut être utilisé dans les emballages des limonades, eaux, boissons alcoolisées, jus de fruit, produits alimentaires et non alimentaires ainsi que des applications dans les domaines des films et des fibres. La Technologie YXY est la technologie la plus à la pointe du progrès mise au point par la division Chimies Renouvelables. Les deux autres projets, baptisés le Projet Zambezi et le Projet Mekong, ont atteint ou sont sur le point d'atteindre le stade d'usines pilotes. Le Projet Zambezi ambitionne de mettre au point un procédé rentable de fabrication de glucose de grande pureté à partir d'une biomasse non alimentaire pouvant être convertie en produits biochimiques, par exemple du FDCA, de l'acide lactique et des antibiotiques. Le Projet Mekong est un procédé de fabrication de MEG à partir de glucose en une seule étape. À l'heure actuelle, le marché du MEG repose principalement sur l'utilisation de combustibles fossiles et représente un chiffre d'affaires de plus de 20 milliards de dollars. Le MEG biologique possède les mêmes propriétés chimiques que celui produit à partir d'énergies fossiles. Avantium a l'intention de démarrer la construction de ses usines pilotes dédiées à ces projets au cours des deux prochaines années. Le Projet Volta est au stade du laboratoire et comprend l'utilisation directe de l'électricité dans les processus chimiques, et ce compris la conversion de CO_2 en éléments constitutifs chimiques. Six autres projets sont actuellement en phase de développement dans le domaine de la Chimie renouvelable : deux d'entre eux sont au stade de concept, tandis que les quatre autres sont au stade du laboratoire. Pendant plus de 15 ans, la division Catalyse a offert des services et systèmes de R&D en catalyse avancée à des sociétés des secteurs de la chimie, de la raffinerie et de l'énergie. Le Groupe compte désormais une forte clientèle internationale, dont certains acteurs prédominants de l'industrie.
B.4a	Les principales tendances récentes ayant des répercussion sur l'émetteur et ses secteurs d'activité	Sur la base des sources reprises au Chapitre 5 « Informations importantes », à la rubrique 5.6 « Informations sur le marché et l'industrie », les principales tendances qui influencent les marchés concernés sont notamment comme suit : La chimie : • le pétrole est une ressource finie, non renouvelable dont la demande ne cesse de croître • nécessité de réduire les émissions de gaz à effet de serre et l'empreinte environnementale • poids croissant des réglementations • accroissement de la demande en produits renouvelables et durables et d'une économie circulaire • volatilité du prix du pétrole

		Le plastique : • approvisionnement en produits durables et produits à label vert • produits frais préparés et déchets alimentaires • construction de la marque grâce à l'emballage • conditionnement en portions, recyclage, marquages propres, facilité et légèreté Les matières premières biologiques : • expiration du système de quotas européen pour le sucrose et le fructose • inquiétudes concernant les applications non alimentaires de la biomasse • diminution de la demande concernant le sirop de maïs à haute teneur en fructose en raison du renforcement des craintes pour la santé liées à la consommation excessive de sucre Les catalyseurs : • valorisation du pétrole et du gaz à la source • diversification des matières premières • législation plus sévère
B.5	Groupe, décrire ce groupe et la place qu'y occupe l'émetteur	La Société est la société mère d'un groupe de sociétés d'exploitation. Les actifs principaux de la Société sont notamment constitués des capitaux propres qu'elle détient à 100 %, directement ou indirectement dans ses filiales d'exploitation, et de la participation à 49 % qu'elle détient dans la Coentreprise.
B.6	Principaux actionnaires	Le tableau suivant offre des renseignements sur la propriété finale de chaque titulaire d'Actions (un **Actionnaire**) ou groupe d'Actionnaires liés, qui détiennent actuellement au moins 3 % du capital émis et en circulation de la Société.

Actionnaire	**Montant de capital social détenu**	
	Nombre d'Actions	**Pourcentage du capital social et de droits de vote** [3]
FCPR Sofinnova Capital VI	26,218,429	19.9%
Capricorn Cleantech Fund N.V.	23,214,852	17.6%
ING Corporate Investments Participaties B.V.	18,182,700	13.8%
Coöperatieve Aescap Venture I U.A.	16,863,952	12.8%
Rise Merit Limited [1]	10,202,000	7.7%
Navitas B.V.	8,694,267	6.6%
FCPR Aster II	7,282,897	5.5%
Timber Invest 1 Coöperatief U.A.	7,282,897	5.5%
European Refreshments [2]	5,101,000	3.9%

(1) Rise Merit Limited est contrôlée indirectement par Swire Pacific Ltd.
(2) The Coca-Cola Company contrôle indirectement European Refreshments.
(3) Les autres Actionnaires, notamment la Fondation Avantium, détiennent une participation totale de 8,825,505 Actions, représentant 6.7% du capital social et de droits de vote.

Dans la première colonne du tableau ci-dessous figurent des renseignements sur la détention des Actions par chaque Actionnaire qui détient au moins 3 % des capitaux propres émis et en circulation de la Société au Règlement, après une restructuration de capital (la **Restructuration de capital**) impliquant une modification des statuts de la Société qui stipuleront un regroupement d'actions et par conséquent une augmentation du montant nominal individuel des Actions de 0,01 euro à 0,10 euro. Les deuxième et troisième colonnes présentent des informations sur la taille de la participation de chaque Actionnaire détenant au moins 3 % des capitaux propres émis et en circulation de la Société consécutivement au Règlement. Ces chiffres tiennent compte (i) de la conversion en Actions des prêts convertibles émis par la Société en mars 2016 en faveur de PMV-TINA Comm. VA (**PMV**), de SFPI-FPIM SA/NV (**FPIM**) et de certains de ses Actionnaires existants, notamment FCPR Sofinnova Capital VI (**Sofinnova**), Capricorn Cleantech Fund N.V. (indirectement) (**Capricorn**), ING Corporate Investments Participaties B.V. (**ING Participaties**), Navitas B.V. (**Navitas**), FCPR Aster II (**Aster II**) et Timber Invest 1 Coöperatief U.A. (**Timber Invest 1**) (conjointement les **Prêteurs CPC**) à un prix de conversion de 80 % du Prix de l'Offre (les **Prêts convertibles**) (cf. Chapitre 10 « Examen des résultats et de la situation financière », rubrique 10.8 « Liquidités et ressources en capital », sous la rubrique « Convention relative aux prêts convertibles ») ; et (ii) de l'hypothèse concernant l'émission de 8,133,168 Actions nouvelles émises dans le cadre de l'Offre.

Actionnaire	**Actions détenues au Règlement, après la Restructuration de capital**		**Actions détenues immédiatement après le Règlement, sans l'exercice de l'Option d'accroissement et de l'Option de surallocation**		**Actions détenues immédiatement après le Règlement, avec l'exercice en totalité de l'Option d'accroissement et de l'Option de surallocation**	
	Nombre	%	Nombre	%	Nombre	%
FCPR Sofinnova Capital VI	2,621,842	19.9%	2,929,088	12.2%	2,929,088	11.0%
Stichting APG Developed Markets Equity Pool	-	0.0%	2,727,272	11.4%	2,727,272	10.2%
Capricorn Cleantech Fund N.V.	2,321,485	17.6%	2,469,127	10.3%	2,469,127	9.3%
PMV-TINA Comm. VA	-	0.0%	2,261,414	9.4%	2,261,414	8.5%
ING Corporate Investments Participaties B.V.	1,818,270	13.8%	2,012,258	8.4%	2,012,258	7.6%
Coöperatieve Aescap Venture I U.A.	1,686,395	12.8%	1,686,395	7.0%	1,686,395	6.3%
SFPI-FPIM SA/NV	-	0.0%	1,130,909	4.7%	1,130,909	4.2%
Rise Merit Limited	1,020,200	7.7%	1,020,200	4.2%	1,020,200	3.8%
Navitas B.V.	869,426	6.6%	968,500	4.0%	968,500	3.6%
FCPR Aster II	728,289	5.5%	814,140	3.4%	814,140	3.1%
Timber Invest 1 Coöperatief U.A.	728,289	5.5%	814,113	3.4%	814,113	3.1%
European Refreshments	510,100	3.9%	510,100	2.1%	510,100	1.9%
Nouveaux investisseurs (publics)	-	0.0%	3,633,182	15.1%	6,256,128	23.5%

		Tous les Actionnaires sont titulaires des mêmes droits de vote.
B.7	Les informations financières historiques clés sélectionnes pour l'émetteur	Les données financières passées du Groupe qui ont été sélectionnées pour figurer dans les tableaux ci-après doivent être lues en parallèle avec les informations indiquées au Chapitre 5 « Informations importantes », rubrique 5.4 « Présentation des informations financières et d'autres renseignements », au Chapitre 8 « Capitaux propres et endettement », au Chapitre 9 « Examen des résultats et de la situation financière » et dans les comptes consolidés, ainsi que leurs notes annexes, figurant au Chapitre 22 « Table des matières des états financiers » (les **Informations financières**). Les informations financières au titre de l'exercice clos le 31 décembre 2014 (l'**Exercice 2014**) (i) sont tirées des informations comparatives qui figurent dans les états financiers consolidés audités au titre de l'exercice clos le 31 décembre 2015 (l'**Exercice 2015**), qui s'écartent des informations financières auditées au titre de l'Exercice 2014 en raison de la division Technologie YXY qui a été catégorisée en tant qu'activité abandonnée en 2015 et (ii) sont tirées, à titre de comparaison, des informations financières au titre de l'Exercice 2014 qui sont reprises dans les états financiers consolidés audités au titre de l'Exercice 2014, lesquels répertorient la division Technologie YXY comme une activité poursuivie et la division Pharma, comme une activité abandonnée. Les informations financières au titre de l'exercice clos le 31 décembre 2013 (l'**Exercice 2013**) sont tirées des états financiers consolidés audités au titre de l'Exercice 2014. La division Technologie YXY y est présentée comme une activité poursuivie tandis que la division Pharma y est répertoriée en activité abandonnée. Dans les informations financières publiées au titre du troisième trimestre 2016, la division Technologie YXY est présentée comme une activité abandonnée. Dans les chiffres comparatifs publiés au titre du troisième trimestre 2015, il apparaît que les deux divisions Technologie YXY et Pharma sont toutes deux catégorisées dans les activités abandonnées. Pour des renseignements complémentaires, consulter le Chapitre 5 « Informations importantes », rubrique 5.4 « Présentation des informations financières et d'autres renseignements ».

État consolidé du résultat global

en milliers d'euros	1ste semestre 2016 (*1) Chiffres non vérifiés	1ste semestre 2015 (*2) Chiffres non vérifiés	E 2015 (*3)	E 2014 (*4)	E 2014 (*5)	E 2013 (*6)
Activités poursuivies						
Chiffre d'affaires	6.148	7.008	10.266	9.628	10.306	13.070
Charges (*7)						
Frais de vente directs	-1.088	-858	-1.767	-2.276		
Charges de personnel	-4.922	-5.661	-6.841	-6.108		
Dépréciations, amortissements et pertes de valeur	-577	-447	-621	-569		
Charges de bureau et de logement	-1.458	-1.232	-1.846	-1.356		
Frais de brevet, de licence, de services juridiques et de conseil	-1.732	-622	-1.002	-1.009		
Frais de laboratoire	-816	-784	-1.009	-1.197		
Frais de marketing et de représentation	-498	-425	-559	-827		
Autres charges opérationelles	-320	-35	-94	-411		
Coût de ventes					-9.687	-8.958
Frais de vente de marketing					-2.156	-2.030
Frias de recherche et développement					-9.744	-8.807
Dëpenses administratives et autres frais généraux					-2.938	-3.548
Perte opérationelle	**-5.263**	**-3.056**	**-3.473**	**-4.126**	**-14.221**	**-10.273**
Produit financier	-	79	124	268	268	202
Charges financières	-1.433	-209	-1	-598	-845	-981
Charges financières - Montant net	**-1.433**	**-130**	**123**	**-330**	**-577**	**-779**
Perte avant impôt	**-6.696**	**-3.185**	**-3.350**	**-4.456**	**-14.798**	**-11.053**
Impôt sur le résultat	-	-	-	-		
Perte au titre de l'exercice provenant des activités poursuite	**-6.696**	**-3.185**	**-3.350**	**-4.456**	**-14.798**	**-11.053**
Perte au titre de l'exercice provenant des activités abandonnée	**-5.352**	**-7.022**	**-9.828**	**-9.899**	**-442**	**-73**
Perte au titre de l'exercice	**-12.048**	**-10.208**	**-13.178**	**-14.356**	**-14.356**	**-11.125**
Total résultat global au titre de l'exercice	**-12.048**	**-10.208**	**-13.178**	**-14.356**	**-14.356**	**-11.125**
Perte attribuable :						
aux propriétaires de la société mère	-12.048	-10.208	-13.178	-14.798	-14.798	-11.053
aux participations minoritaires	-	-	-	442	442	-73
	-12.048	**-10.208**	**-13.178**	**-14.356**	**-14.356**	**-11.125**
Total résultat global attribuable :						
aux propriétaires de la société mère	-12.048	-10.208	-13.178	-14.798	-14.798	-11.053
aux participations minoritaires	-	-	-	442	442	-73
	-12.048	**-10.208**	**-13.178**	**-14.356**	**-14.356**	**-11.125**

(1) Les chiffres de cette colonne n'ont pas été vérifiés et sont tirés des états financiers intermédiaires, résumés et consolidés au titre du troisième trimestre 2016. La division Technologie YXY y est indiquée dans les activités abandonnées.

(2) Les chiffres de cette colonne n'ont pas été vérifiés et sont tirés des chiffres comparatifs des états financiers intermédiaires, résumés et consolidés au titre du troisième trimestre 2016. La division Technologie YXY et le résultat de la cession de la division Pharma sont indiqués dans les activités abandonnées.

(3) Les chiffres de cette colonne proviennent des états financiers audités au titre de l'Exercice 2015. La division Technologie YXY et le résultat de la cession de la division Pharma sont indiqués dans les activités abandonnées.

(4) Les chiffres de cette colonne sont tirés des chiffres comparatifs au titre de l'Exercice 2014 et des états financiers audités au titre de l'Exercice 2015. Les divisions Technologie YXY et Pharma y sont indiquées dans les activités abandonnées.

(5) Les chiffres de cette colonne sont tirés des états financiers audités au titre de l'Exercice 2014. La division Technologie YXY apparaît dans les activités poursuivies et la division Pharma est indiquée dans les activités abandonnées.

(6) Les chiffres de cette colonne sont tirés des chiffres comparatifs au titre de l'Exercice 2013 et des états financiers audités au titre de l'Exercice 2014. La division Technologie YXY apparaît dans les activités poursuivies et la division Pharma est indiquée dans les activités abandonnées.

(7) Le Groupe a retraité les catégories de charges des états financiers consolidés publiés concernant le compte de résultat dans les états financiers de 2015 pour mieux refléter les véritables charges encourues et garantir une cohérence entre les rapports internes et externes.

Bilan consolidé

en miilliers d'euros	1er semestre 2016 (*1) Chiffres non vérifiés	E 2015 (*2)	E 2014 (*3)	E 2013 (*4)
Actif				
Actif non courant				
Immobilisations corporelles	3.767	4.017	9.180	9.606
Immobilisations incorporelles	325	359	228	292
Total actif non courrant	**4.092**	**4.376**	**9.408**	**9.898**
Actif courant				
Stocks	985	1.045	896	1.309
Clients et autres débiteurs	6.248	5.086	5.505	4.917
Trésorerie et équivalents de trésorerie	13.852	6.981	19.140	5.425
Total actif courrant	**21.085**	**13.112**	**25.541**	**11.652**
Actifs détenus en vue de la vente	7.943	5.424	419	-
Total actif	**33.120**	**22.913**	**35.369**	**21.550**
Passif				
Passif non courant				
Emprunts	3.758	3.600	3.865	5.651
Provisions pour autres passifs et charges	-	-	266	256
Total passif non courant	**3.758**	**3.600**	**4.132**	**5.907**
Passif courant				
Emprunts	22.409	400	2.033	10.674
Fournisseurs et autres créditeurs	8.338	6.196	7.472	7.997
Provisions pour autres passifs et charges	175	168	264	193
Total passif courant	**30.923**	**6.764**	**9.769**	**18.864**
Passifs liés aux actifs détenus en vue de la vente	-	3.190	(62)	-
Total passif	**34.681**	**13.555**	**13.838**	**24.771**
Fonds propres				
Fonds propres attribuables aux propriëtaires de la société mère				
Actions ordinaires	1.319	1.319	1.319	927
Prime d'émission	81.272	81.272	81.272	43.491
Autres réserves	6.070	5.266	5.207	4.272
Bénéfices non distribués	(90.223)	(78.499)	(66.784)	(51.986)
Total fonds propres attribuables aux propriétaires de la société mère	(1.562)	9.358	21.014	(3.296)
Participations minoritaires	-	-	517	75
Total fonds propres	**-1.562**	**9.358**	**21.531**	**-3.221**
Total fonds propres et passif	**33.120**	**22.913**	**35.369**	**21.550**

(1) Les chiffres de cette colonne n'ont pas été vérifiés et sont tirés des états financiers intermédiaires, résumés et consolidés au titre du troisième trimestre 2016. Les actifs et passifs de la division Technologie YXY sont catégorisés dans les rubriques détenues en vue de la vente.

(2) Les chiffres de cette colonne proviennent des états financiers audités au titre de l'Exercice 2015. Les actifs et passifs de la division Technologie YXY sont catégorisés dans les rubriques détenues en vue de la vente. La division Pharma a effectivement été cédée au 31 décembre 2014 et a été ultérieurement exclue des chiffres du Groupe.

(3) Les chiffres de cette colonne sont tirés des états financiers audités au titre de l'Exercice 2014. Les actifs et passifs de la division Pharma sont catégorisés dans les rubriques détenues en vue de la vente.

(4) Les chiffres de cette colonne sont tirés des chiffres comparatifs au titre de l'Exercice 2013 et des états financiers audités au titre de l'Exercice 2014. Ils sont similaires aux chiffres comparatifs au titre de l'Exercice 2014 inclus dans les états financiers audités au

titre de l'Exercice 2014.

État consolidé des flux de trésorerie

en milliers d'euros	1ste semestre 2016 (*1) Chiffres non	1ste semestre 2015 (*2) Chiffres non	FY 2015 (*3)	FY 2014 (*4)	FY 2014 (*5)	FY 2013 (*6)
Flux de trésoreri découlant des opérations poursuivies						
Flux de trésoreri découlant des opérations d'exploitation						
Perte au titre de l'exercice provenant des activités poursuivies	(6.696)	(3.185)	(3.350)	(4.456)	(14.798)	(11.053)
Ajustements au titre:						
- des dépréciations	487	406	568	500	2.099	1.951
- des amortissements	90	41	53	69	88	151
- des pertes de valeur	-	-	-	-	-	-
- des paiements fondés sur des actions	1.128	586	1.005	935	935	1.192
- des charges financières - Montant net	1.433	130	(123)	330	577	778
Variation du besoin en fonds de roulement (hormis les é carts de change lors de la consolidation)						
- (Augmention) des stocks	60	(283)	(255)	136	31	(305)
- (Augmention) des clients et autres débiteurs	(1.162)	2.711	(465)	(828)	(970)	(708)
- Augmention des fournisseurs et autres créditeurs	2.142	(3.359)	590	(1.975)	(457)	128
- Augmention des provisions	7	(372)	(362)	97	97	102
	(2.512)	(3.325)	(2.337)	(5.191)	(12.398)	(7.764)
Intérêts (versés)	(2)	(9)	(60)	(159)	(159)	(115)
Trésorerie nette consacrée aux opérations d'exploitation	(2.514)	(3.334)	(2.397)	(5.350)	(12.557)	(7.879)
Trésorerie nette découlant des opérations d'investissement						
Achats d'immobilisations corporelles	(244)	(1.625)	(2.126)	(1.635)	(1.635)	(1.960)
Achats d'immobilisations incorporelles	(56)	(31)	(191)	(185)	(185)	(26)
Trésorerie nette consacrée des opérations d'investissement	(300)	(1.656)	(2.317)	(1.820)	(1.820)	(1.986)
Trésorerie nette provenant des opérations de financement						
Produits de l'émmision d'actions ordinaires	-	-	-	27.035	27.035	-
Intérêts perçus	-	44	124	268	268	203
Prêt à l'innovation	-	-	224	-	-	1.222
Obligation convertible	20.000	-	-	-	-	10.000
Remboursements d'emprunts	-	-	(5)	(5)	(5)	(5)
Trésorerie nette générée des opérations de financement	20.000	44	343	27.298	27.298	11.421
Flux de trésorerie découlant des opérations abandonnées						
Trésorerie nette provenant de/(consacrée aux) opérations d'exploitation	(7.578)	(2.403)	(3.847)	(6.461)	745	(37)
Trésorerie nette provenant de/(consacrée aux) opérations d'investissement	(2.738)	-	-	-	-	-
Trésorerie nette provenant de/(consacrée aux) opérations de financement	-	(4.000)	(4.000)	21	21	-
Variation de trésorerie provenant des opérations abandonnées	**(10.316)**	**(6.403)**	**(7.847)**	**(6.440)**	**767**	**(37)**
Augmentation/(diminution) nette de la trésorerie et des équivalents de trésorerie	**17.186**	**(4.946)**	**(4.371)**	**20.128**	**12.921**	**1.556**
Trésorerie et équivalents de trésorerie à l'ouverture de l'exercice	6.981	19.140	19.140	5.425	5.425	3.904
Effets des fluctuations des taux de change	(0)	35	59	26	26	2
Trésorerie et équivalents de trésorerie provenant des opérations poursuives à la clôture de l'exercice	**24.168**	**14.230**	**14.828**	**25.580**	**18.373**	**5.462**
Trésorerie et équivalents de trésorerie à la clôture de l'exercice	**13.852**	**7.827**	**6.981**	**19.140**	**19.140**	**5.425**

(1) Les chiffres de cette colonne n'ont pas été vérifiés et sont tirés des états financiers intermédiaires, résumés et consolidés au titre du premier semestre 2016. La division Technologie YXY y est indiquée dans les activités abandonnées.

(2) Les chiffres de cette colonne n'ont pas été vérifiés et sont tirés des chiffres comparatifs des états financiers intermédiaires, résumés et consolidés au titre du premier semestre 2016. La division Technologie YXY et le résultat de la cession de la division Pharma sont indiqués dans les activités abandonnées.

(3) Les chiffres de cette colonne proviennent des états financiers audités au titre de l'Exercice 2015. La division Technologie YXY et le résultat de la cession de la division Pharma sont indiqués dans les activités abandonnées.

(4) Les chiffres de cette colonne sont tirés des chiffres comparatifs au titre de l'Exercice 2014 et des états financiers audités au titre de l'Exercice 2015. Les divisions Technologie YXY et Pharma y sont indiquées dans les activités abandonnées.

(5) Les chiffres de cette colonne sont tirés des états financiers audités au titre de l'Exercice 2014. La division Technologie YXY apparaît dans les activités poursuivies et la division Pharma est indiquée dans les activités abandonnées.

(6) Les chiffres de cette colonne sont tirés des chiffres comparatifs au titre de l'Exercice 2013 et des états financiers audités au titre

		de l'Exercice 2014. La division Technologie YXY apparaît dans les activités poursuivies et la division Pharma est indiquée dans les activités abandonnées.
B.8	Les informations financières pro forma clés sélectionnées	Le 30 Novembre 2016, Avantium a établi la Joint-Venture (avec effet économique à partir du 1 Juillet 2016), dans laquelle elle détient un intérêt non-majoritaire de 49%, dans laquelle Avantium a contribué la technologie YXY, l'usine pilote («the pilot plant ») et les brevets et know-how associés. *A titre d'illustration[3], si l'opération avait été effectuée au début de la période de neuf mois se terminant au 30 Septembre 2016, cela aurait résulté dans les changements suivants sur le compte de résultat et états financiers consolidés « pro-forma » non-audités au 1 Janvier 2016 :* • un gain de €48.8 millions (net d'impôt, cependant la société prévoit suffisamment de pertes fiscales à reporter) aurait été réalisé après avoir reçu une participation dans la Joint-Venture ayant une valeur de €55.0 millions moins €6.2 millions de valeur comptable des actifs transférés à la Joint-Venture. Les 49% de participation dans la Joint-Venture est valorisée à €55.0 millions reflétant la contribution the BASF de €57.2 millions dans la Joint-Venture en accordance avec son intérêt de 51% au 30 novembre 2016 (la date de constitution de la Joint-Venture) ; • au 30 Novembre 2016 (la date de constitution de la Joint -enture), il n'y aurait pas de créance qui aurait été estimée à €5.8 millions de la Joint-Venture en relation avec des dépenses et investissements pour la période allant de juillet 2016 à Novembre 2016. Le montant estimé des €5.8 millions est basé sur les coûts effectifs réalisés par la Technologie YXY et le montant final sera établi après discussion avec la Joint-Venture et la finalisation de l'audit des états financiers consolidés du groupe au et pour l'année fiscale se terminant le 31 Décembre 2016 ; • une compensation en cash estimée aurait été reçue de la Joint-Venture pour des frais généraux alloués de €1.2 million ;et • les €5.4 millions de pertes pour la période des opérations abandonnées ne seraient pas enregistrées dans les états financiers consolidés publiés concernant le compte de résultat du groupe. A la place, il y aurait une perte prévue de la participation dans la Joint-Venture estimée à €3.2 millions, représentant 49% de la perte opérationelle de €6.6 millions (€5.4 millions comme perte pour la période à partir des opérations abandonnées plus le montant susmentionné de €1.2 million comme frais généraux facturés par le Groupe) et une diminution ultérieure de la valeur de la participation dans la Joint-Venture avec une perte présumée de €3.2 millions. A l'avenir, la valorisation de la participation dans la Joint-Venture, en particulier la Propriété Intellectuelle concernant la technologie YXY, sont en grande part dépendantes des estimations des cash-flows futurs générés par la Joint-Venture et le coût moyen pondéré du capital. Le Groupe estime pour le moment une période d'amortissement de 10 ans pour l' « Usine Référence » en accord avec les normes comptables IFRS, les immobilisations corporelles et incorporelles font lobjet d'un test annuel de dépréciation ou lors de la survenance d'un évènement déclencheur. Une perte de valeur sera reconnue dans le compte de résultat de la Joint-Venture lorsque la valeur comptable de l'actif est plus élevé que le montant récupérable. Toute perte de valeur actée par la Joint-Venture peut avoir un impact sur le résultat des opérations du Groupe. La performance de la Joint-Venture est également impactée par des conditions internationales, régionales et locales, telles que la macroéconomie et les régulations gouvernementales, de manière similaire au Groupe.
B.9	Prévision ou estimation du bénéfice et, le cas échéant, montant	Sans objet ; la Société n'a publié aucune prévision de bénéfice.
B.10	Description de la nature des éventuelles réserves sur les Informations historiques contenues	Sans objet ; aucune réserve n'a été émise.

[3] Cette information pro-forma non-auditée est uniquement destinée à être utilisée à titre d'illustration, et de par sa nature, correspond à une situation hypothétique et n'est pas représentative de la position financière réelle du Groupe. Elle est basée sur la présomption de la mise en place de la Joint-Venture au 1er janvier 2016. Ces présomptions et l'information financière pro-forma en résultant n'ont pas été auditées ou revues conformément aux standards d'audit généralement reconnus.

	dans le rapport d'audit	
B.11	Déclaration sur le fonds de roulement	La Société estime que le Groupe dispose des fonds de roulement suffisants pour respecter ses exigences actuelles, c'est-à-dire pour une période minimale de douze mois à partir de la date de publication du présent Prospectus.
	Section C – Valeurs mobilières	
C.1	la nature et de la catégorie des valeurs mobilières offertes et/ou admises à la négociation et indication de tout numéro d'identification des valeurs mobilières	Les Actions sont des actions ordinaires du capital social de la Société. Une demande de cotation de toutes les Actions sous le symbole « AVTX » a été introduite auprès des bourses Euronext d'Amsterdam et de Bruxelles sous le code ISIN NL0012047823.
C.2	Monnaie des valeurs mobilières	Les Actions sont libellées et s'échangeront en euros.
C.3	Nombre d'actions émises / Valeur nominale des actions	À la date du présent Prospectus, le capital social émis et en circulation de la Société s'élèvera à 1,318,664.99 euros et se composera d'une seule classe d'actions d'une valeur nominale de 0,01 euro par action. Toutes les actions émises sont entièrement libérées et ont été créées en vertu du droit néerlandais qui les régit. La valeur nominale des actions constituant le capital de la Société sera portée à 0,10 euro dans le cadre de la Restructuration de capital.
C.4	Droits attachés aux valeurs mobilières	Les indications des **Statuts** qui figurent ci-après font référence aux statuts de la Société, dans leur version modifiée avant le Règlement. Chaque Action offerte confère le droit d'exprimer une voix lors de l'assemblée générale des actionnaires de la Société (l'**Assemblée générale**). Les droits de vote ne sont entachés d'aucune restriction, hormis celle que la Société ne dispose pas de droits de vote sur les Actions qu'elle conserve en trésorerie. Les Actions offertes donneront le droit à des dividendes que la Société pourra déclarer sur les Actions après la Date de règlement. Les titulaires des Actions jouissent d'un droit préférentiel en cas d'émission d'Actions. Ils ne disposent par contre pas de ce droit au titre des Actions émises lors d'un apport en nature ou des Actions émises en faveur des employés du Groupe ou d'une société de celui-ci. Les droits préférentiels s'appliquent également en cas d'attribution de droits à souscrire à des Actions. Sous réserve de l'approbation du Conseil de surveillance de la Société (le **Conseil de surveillance**), le directoire de la Société (le **Directoire**) est autorisé à limiter ou exclure les droits préférentiels auxquels les Actionnaires ont droit dans la mesure où l'Assemblée générale l'a autorisé à ce titre, et dès lors uniquement qu'il est alors également autorisé à émettre des Actions. Cette autorisation peut uniquement être décernée pour une période maximale de cinq ans. L'Assemblée générale a désigné le Directoire pour une période qui prendra fin dix-huit mois après la Conversion comme l'organe social autorisé à émettre les Actions ou accorder des droits de souscription à des Actions et à restreindre ou exclure les droits préférentiels. En vertu de ce mandat, le Directoire peut décider d'émettre des Actions ou d'accorder des droits de souscription à des Actions représentant (i) au maximum 10 % du nombre total d'Actions émises et en circulation à la Date de règlement à des fins non précisées, (ii) une tranche supplémentaire de 10 % du nombre total d'Actions émises et en circulation le jour de la Date de règlement dans le cadre ou à l'occasion de fusions ou d'acquisitions et d'alliances stratégiques et (iii) au maximum 10 % dans le cadre d'un régime d'intéressement, d'un programme de détention de capital et/ou de tout autre plan comparable, sous réserve de l'approbation du Conseil de surveillance. Cette autorisation pourra être périodiquement prolongée par résolution de l'Assemblée générale pour une période maximale de cinq ans.
C.5	Restriction imposée à la	Les Statuts n'imposent aucune restriction à la libre négociabilité des Actions offertes.

	libre négociabilité des valeur mobilières	L'offre des Actions offertes à des personnes résidentes ou citoyennes d'autres pays que les Pays-Bas ou la Belgique ou qui ont une adresse de résidence dans un tel pays, et la cession d'Actions offertes dans d'autres pays que les Pays-Bas ou la Belgique peuvent toutefois être soumises à des réglementations ou restrictions spécifiques.
C.6	Demande d'admission à la négociation	Une demande de cotation de toutes les Actions sous le symbole « AVTX » a été introduite auprès des bourses Euronext Amsterdam et Bruxelles. Sous réserve de l'accélération ou du prolongement du calendrier de l'Offre, la négociation des Actions sur la base de titres éventuellement émis et/ou délivrés devrait commencer sur Euronext aux alentours du 15 Mars 2017, à condition que la Période de l'offre dure au moins six jours ouvrés.
C.7	Politique en matière de dividendes	La Société ne s'attend pas à verser de dividendes dans un avenir proche.
	Section D – Risques	
D.1	Les principaux risques propres à l'émetteur ou à son secteur d'activité.	Les paragraphes suivants constituent une sélection des principaux risques qui se rapportent au secteur d'activités, aux activités et opérations du Groupe, à la création de la Société sous la forme d'une société cotée et à l'Offre. Pour effectuer son choix, le Groupe a évalué les circonstances, par exemple la probabilité de matérialisation des risques sur la base de l'état actuel des affaires, l'incidence éventuelle de la matérialisation des risques sur les activités, la situation financière et les résultats d'exploitation du Groupe. Les investisseurs sont invités à lire, comprendre et prendre en compte tous les facteurs de risque exposés au Chapitre 4 « Facteurs de risque » commençant en page 52 du présent Prospectus avant de prendre la décision d'investir dans les Actions offertes. **Risques liés aux activités du Groupe et à son secteur d'activités** • Le Groupe a encouru des pertes et des flux de trésorerie négatifs, et a accumulé un déficit. Il prévoit qu'il continuera de subir des pertes dans un avenir proche et qu'il pourrait ne jamais atteindre la rentabilité ou la conserver ; • La capacité du Groupe à générer un bénéfice à partir de la Technologie YXY dépend principalement de la capacité de la Coentreprise à parvenir à commercialiser cette technologie ; • Le Groupe risque de ne pas parvenir à développer avec succès ses projets R&D au sein de sa division Chimies Renouvelables, ce qui pourrait nuire aux activités, à la situation financière, au résultat d'exploitation et aux perspectives du Groupe ; • Pour continuer à développer ou commercialiser ses projets R&D au sein de sa division Chimies Rnouvelables, une collaboration devra être établie avec des partenaires. Un échec éventuel du Groupe à conclure, conserver ou mettre en œuvre correctement des accords de développement conjoint avec des partenaires pour ses projets R&D dans le secteur des Chimies Renouvelables pourrait l'empêcher de développer et commercialiser ces projets ; • Le Groupe pourrait être confronté à des difficultés technologiques supplémentaires au sein de sa division Chimies Renouvelables qui pourraient retarder voire empêcher le développement et la commercialisation ultérieurs de ses projets ; • Le chiffre d'affaires du Groupe attribuable à sa division Catalyse est généré en grande partie par un faible nombre de grands clients ; et • Si le Groupe est incapable de protéger suffisamment la technologie, les produits, les processus, les informations, les secrets commerciaux et le savoir-faire dont il est propriétaire, ses activités pourraient se détériorer considérablement. **Risques liés à la Coentreprise** • La décision de procéder à la construction de l'Usine de référence est soumise à certaines conditions. Avantium et BASF peuvent chacune exercer leurs droits de sortie, ce qui aurait pour effet de liquider la Coentreprise avant d'atteindre une décision positive concernant la construction de l'Usine de référence. Aucune garantie ne peut être donnée que l'Usine de référence sera terminée, a fortiori dans les délais ou le budget fixés. • Le Groupe ne contrôle pas la Coentreprise et les intérêts de BASF peuvent s'opposer à ceux du Groupe ; la valeur de la Coentreprise pourrait s'en trouver détériorée ; et • La réussite commerciale de la Coentreprise dépendra de l'acception du PEF et des produits à base de PEF par le marché. De plus, la capacité de la Coentreprise à vendre le FDCA, le PEF et les licences pourra uniquement être déterminée lorsque l'Usine de référence deviendra opérationnelle ; et

		• La Technologie YXY risque de ne pas être aussi performante qu'annoncé dans les prévisions à l'échelle envisagée à l'Usine de référence. Par ailleurs, le FDCA produit à l'Usine de référence ou le PEF produit par des tiers ne respecteront peut-être pas les normes de qualité ou spécifications requises du produit. • Des poursuites judiciaires ou actions de tiers en matière de violation de la propriété intellectuelle pourraient nécessiter des résolutions très longues et coûteuses, et se traduire par des dommages-intérêts. Des résultats défavorables au cours de ces procédures pourraient restreindre les droits de propriété intellectuelle de la Coentreprise et l'empêcher de commercialiser la Technologie YXY.
D.3	Les principaux risques propres aux valeurs mobilières	**Risques liés à l'Offre et aux Actions** • Après l'Offre, les Actionnaires principaux de la Société pourront exercer une influence substantielle sur la Société et les intérêts poursuivis par ces Actionnaires pourraient diverger de ceux des autres Actionnaires de la Société ; • Le risque qu'un marché actif et liquide pour les Actions ne se développe pas existe et les Actions auront peut-être un cours volatil ; • Les fluctuations de chiffres d'affaires et des autres revenus générés par la Coentreprise pour le Groupe peuvent avoir une forte incidence sur le prix de l'action du Groupe et contribuer à sa volatilité ; et • La Société n'envisage pas de verser de dividendes dans un avenir proche et sa capacité à verser des dividendes est incertaine.
Section E – Offre		
E.1	total net du produit de l'Offre et estimation des dépenses totales liées à l'offre	La Société estime que les produits bruts de l'Offre pour la Société s'élèveront environ à 90 millions d'euros, dans l'hypothèse de l'émission de 8,133,168 Actions nouvelles émises dans le cadre de l'Offre (à l'exception des Actions découlant de l'exercice de l'option d'accroissement et des Actions découlant de l'exercice de l'option de surallocation (définies toutes les deux ci-après). Les coûts de la Société associés à l'Offre devraient atteindre un montant maximum avoisinant 8 millions d'euros (y compris les dépenses estimées se rapportant à l'Offre et le paiement intégral de tous les frais et commissions payables aux Souscripteurs, y compris les frais discrétionnaires). Les produits nets minimums de l'Offre pour la Société devront atteindre au moins 65 millions d'euros. Avantium a reçu des engagements irrévocables de souscrire aux Actions Offertes (telles que définies ci-dessous) pour un montant de 20 millions € et des intentions fermes de souscrire aux Actions Offertes pour un montant de 64 millions € (soit pour un montant total 56 millions € nets).
E.2a	Les raisons de l'offre et utilisation prévue du produit de celle-ci	La Société prévoit actuellement d'affecter le produit net de l'Offre comme suit : (i) de l'ordre de 65 à 75 millions d'euros du produit net seront affectés au financement de la Coentreprise pour l'aider à construire et exploiter l'Usine de référence destinée à la commercialisation de la Technologie YXY ; (ii) de l'ordre de 15 à 20 millions d'euros du produit net seront affectés à la construction des usines pilotes pour les deux projets de développement les plus avancés au sein de la division Chimies Renouvelables, le Projet Zambezi et le Projet Mekong, ainsi que pour faire aboutir l'exploitation de ces installations au stade commercial (environ 7.5 à 10 millions d'euros par projet) ; et (iii) les fonds restants seront affectés à d'autres projets de la division Chimies Renouvelables (y compris le projet Volta) et aux affaires générales de la société conformément aux activités et à la stratégie du Groupe, par exemple les besoins en fonds de roulement et de (re)financement, les dépenses administratives et autres frais généraux et les frais supplémentaires découlant d'une société cotée en bourse. Si le produit net de l'Offre s'élève à 65 millions d'euros, la Société prévoit d'affecter le montant entier au financement de la Coentreprise. Si l'Usine de référence n'est pas construite dans le respect des modalités du contrat de coentreprise, le Directoire décidera, moyennant l'approbation du Conseil de surveillance et de l'Assemblée générale, d'une autre affectation du produit net susmentionné au point (i).
E.3	Les modalités et les conditions de l'offre	**Les Actions offertes** La Société offre un nombre maximum de 8,133,168 Actions nouvelles émises dans le cadre de l'Offre (hormis les Actions découlant de l'exercice de l'option d'accroissement et les Actions découlant de l'exercice de l'option de surallocation) destinées à lever un montant approximatif de 56 millions d'euros de produit net. Les produits nets minimums de l'Offre pour la Société doivent atteindre au minimum 65 millions d'euros. La Fondation Avantium offre 48 650 Actions (les **Actions de la direction**) au nom du directeur général, du directeur financier et du directeur technique de la Société, représentant 0.6% aux Actions Offertes. Ceux-ci percevront le produit de la vente des Actions de la direction afin de rembourser ou payer les frais de

financement et frais connexes encourus en 2007 dans le cadre de leur investissement dans ces Actions.

L'Offre est constituée comme suit : (i) une offre publique aux Pays-Bas et en Belgique aux investisseurs institutionnels et particuliers et (ii) des placements privés s'adressant à certains investisseurs institutionnels issus de plusieurs autres pays. L'Offre est faite en dehors des États-Unis (les **États-Unis**) et les Actions offertes seront uniquement offertes et vendues dans des transactions offshore en dehors des États-Unis, sur la base du Règlement S (le **Règlement S**) en vertu de la Loi américaine sur les valeurs mobilières de 1933 (*US Securities Act of 1933*), dans sa version modifiée (la **Loi américaine sur les valeurs mobilières**). Les Actions offertes n'ont pas été et ne seront pas enregistrées en vertu de la Loi américaine sur les valeurs mobilières. Elles sont uniquement disponibles dans les pays où leur offre peut être légalement faite et uniquement aux personnes auxquelles il est légal de faire cette offre.

Allocation aux investisseurs particuliers
Sous réserve d'une demande suffisante, il est envisagé d'attribuer au moins 10 % des Actions offertes aux investisseurs particuliers aux Pays-Bas et en Belgique. La proportion des Actions offertes aux investisseurs particuliers dans ces deux pays pourra augmenter ou diminuer si les demandes que les investisseurs ont introduites respectivement dépassent ou atteignent 10 % des Actions offertes. Les investisseurs particuliers en Belgique et aux Pays-Bas seront traités sur un pied d'égalité en ce qui concerne l'affectation en cas de sursouscription à l'Offre.

Option de surallocation
La Société devrait accorder aux Preneurs fermes une option (l'**Option de surallocation**), exerçable par ING, en sa qualité d'agent de stabilisation (l'**Agent de stabilisation**) au nom des Preneurs fermes, dans un délai de 30 jours civils après le Premier jour de cotation. Cette option permettra à l'Agent de stabilisation, au nom et pour le compte des Preneurs fermes, de forcer la Société à émettre au Prix de l'Offre un nombre maximum supplémentaire de 1.219.975 Actions nouvelles émises dans le cadre de l'Offre (ou un nombre maximum supplémentaire de 1.402.971 Actions nouvelles émises dans le cadre de l'Offre si l'Option d'accroissement est exercée dans son intégralité), et constituée au maximum de 15 % du nombre total des Actions nouvelles émises dans le cadre de l'Offre (les **Actions découlant de l'exercice de l'option de surallocation**) pour couvrir les positions à découvert provenant des surallocations effectuées dans le cadre de l'Offre ou des opérations de stabilisation, le cas échéant.

Période de l'Offre
L'Offre aura lieu entre 09 :00, heure d'Europe centrale, le 6 mars 2017 et 17 :30, heure d'Europe centrale, le 13 mars 2017 (la **Période de l'Offre**), sous réserve de l'accélération ou de l'extension du calendrier de l'Offre, à condition que la Période de l'offre dure au moins six jours ouvrés.

Prix de l'Offre et nombre d'Actions offertes
Le prix de l'offre par Action offerte est 11.00 euros (le **Prix de l'Offre**).

La Société peut décider, de commun accord avec les Chefs de file associés, en cas de sursouscription à l'Offre, d'augmenter le nombre total d'Actions nouvelles émises dans le cadre de l'Offre d'un nombre maximum de 15 % des 9,353,143 Actions nouvelles émises dans le cadre de l'Offre (l'**Option d'accroissement**, et toutes Actions nouvelles émises dans le cadre de l'Offre en vertu de l'exercice de l'Option d'accroissement, étant désignées les **Actions découlant de l'exercice de l'option d'accroissement**) à tout moment avant l'allocation des Actions offertes. Cette modification sera annoncée dans un communiqué de presse et sera publiée sur le site Internet de la Société.

Un supplément à ce Prospectus sera publié si le Prix de l'Offre est modifié. Toute augmentation du Prix de l'Offre le dernier jour de la Période de l'Offre entraînera une prolongation de la Période de l'Offre de minimum deux jours ouvrés ; toute augmentation du Prix de l'Offre la veille du dernier jour de la Période de l'Offre entraînera une prolongation de la Période de l'Offre de minimum un jour ouvré. Les investisseurs ayant déjà accepté d'acheter ou de souscrire à des Actions Offertes avant la publication du supplément auront le droit, exerçable dans un délai de deux jours ouvrés à compter de la publication du supplément, de retirer leurs acceptations.

Le nombre exact d'Actions offertes seront déterminés par la Société, de commun accord avec les Chefs de file associés après la clôture de la Période de l'Offre, après avoir tenu compte des conditions décrites au Chapitre 16 « L'Offre », rubrique 16.4 « Le nombre d'Actions offertes ». Le nombre exact d'Actions offertes et le nombre maximum d'Actions surallouées seront indiqués dans une déclaration qui sera publiée, au plus tard le premier jour de cotation après la clôture de la Période de l'Offre, via un communiqué de presse qui sera également publié sur le site Internet de la Société (la **Déclaration sur l'Offre**).

Souscriptions
Les investisseurs particuliers ont le droit d'annuler ou de modifier leur demande, auprès de l'intermédiaire financier auquel ils ont soumis leur demande originale, à tout moment avant la clôture de la Période de l'Offre (qui peut, le cas échéant, être accélérée ou prolongée).

Allocation
L'allocation des Actions offertes devrait avoir lieu au terme de la Période de l'Offre aux alentours de 14 mars 2017, sous réserve de l'accélération ou du prolongement du programme de l'Offre, à condition que la Période de l'Offre dure au moins six jours ouvrés. L'allocation des Actions offertes aux investisseurs sera déterminée par la Société de commun accord avec les Chefs de file associés sur la base de la demande respective des investisseurs particuliers et des investisseurs institutionnels et de l'analyse quantitative et, s'agissant des investisseurs institutionnels uniquement, de l'analyse qualitative du carnet d'ordres, en tenant compte des Actions offertes qui doivent être attribuées aux Investisseurs clés (définis ci-après). Chaque intermédiaire financier communiquera à ses propres clients (particuliers ou institutionnels) leur attribution en respectant les procédures d'usage.

Ces les Investisseurs-Clés seront intégralement attribués pour un montant total de €64 millions.

Aucun nombre maximum ou minimum d'Actions offertes auquel les investisseurs potentiels peuvent souscrire n'est fixé et les (demandes de) souscriptions multiples sont autorisées. En cas de sursouscription de l'Offre, les investisseurs pourront recevoir un nombre d'Actions offertes inférieur à celui auquel ils avaient souscrit.

Nonobstant ce qui précède, il est envisagé d'attribuer au moins 10 % des Actions offertes aux investisseurs particuliers aux Pays-Bas et en Belgique (cf. la rubrique ci-avant « Allocation aux investisseurs particuliers »). La proportion des Actions offertes aux investisseurs particuliers aux Pays-Bas et en Belgique pourra augmenter ou diminuer si les demandes qu'ils ont introduites, respectivement dépassent ou n'atteignent pas 10 % des Actions offertes. Les investisseurs particuliers en Belgique et aux Pays-Bas seront traités sur un pied d'égalité en ce qui concerne l'affectation en cas de sursouscription à l'Offre.

Paiement
Le paiement (en euros) des Actions offertes devrait avoir lieu à la Date de règlement. Les taxes et dépenses éventuelles sont à la charge exclusive de l'investisseur. Ce dernier est tenu de payer le Prix de l'Offre dans son intégralité, sous forme de fonds immédiatement disponibles, en euros, au plus tard au jour de la Date de règlement (ou plus tôt en cas de clôture prématurée de l'Offre et d'accélération consécutive de la fixation du prix, de l'allocation, du commencement de la cotation et du Règlement).

Remise des Actions
Les Actions seront livrées sous la forme d'une écriture comptable auprès des établissements du Nederlands Centraal Instituut voor Giraal Effectenverkeer B.V. (**Euroclear Nederland**), conformément aux procédures ordinaires d'Euroclear Nederland qui sont applicables aux titres de fonds propres et contre paiement du prix intégral des Actions offertes sous la forme de fonds immédiatement disponibles.

La clôture de l'Offre pourrait ne pas avoir lieu à la Date de règlement voire ne pas avoir lieu du tout si certaines conditions ou certains événements mentionnés dans la Convention de prise ferme n'étaient pas satisfaits ou étaient annulés ou survenaient avant cette date. Parmi ces conditions, citons (i) la réception de la documentation habituelle et la satisfaction des conditions habituelles, (ii) la confirmation que les Actions offertes ont été admises à la cotation sur Euronext, et (iii) la finalisation de la Conversion et de la Restructuration de capital, et de certaines autres conditions. Si le Règlement n'a pas lieu le jour de la Date de règlement comme planifié ou n'a pas du tout lieu, l'Offre pourra être retirée, auquel cas toutes les souscriptions aux Actions offertes seront ignorées et toutes les attributions faites seront réputées n'avoir pas eu lieu et les paiements de souscription seront restitués sans intérêts ou autres compensations. Toutes les opérations concernant les Actions offertes avant le Règlement sont aux seuls risques des parties concernées.

Les établissements bancaires participant à l'Offre

- Chefs de file associés : ING et KBC Securities agissent en qualité de chefs de file dans l'Offre (conjointement les **Chefs de file associés**) ;
- Teneurs de livre associés : ING, KBC Securities et Rabobank agissent en tant que teneurs de livre associés dans l'Offre (conjointement les **Teneurs de livre associés**) ;
- Co-chef de file : Oddo et Cie S.C.A. agit en tant que co-chef de file dans l'Offre (le

		Co-chef de file) ; • Preneurs fermes : les Teneurs de livre associés et le Co-chef de file agissent en tant que preneurs fermes dans l'Offre (les **Preneurs fermes**) ; • Agent de cotation et payeur : ING est l'Agent de cotation et payeur des Actions sur Euronext ; et • Agent de stabilisation : ING agit en tant qu'Agent de stabilisation au titre des Actions sur Euronext. **Investisseurs clés** La Société a reçu des engagements inconditionnels et irrévocables de participer à l'Offre et souscrire aux Actions Offertes de la part de certain les prêteurs CLA pour un montant total de €20 millions. La Société a également reçu des intentions fermes de participer à l'Offre et souscrire aux Actions Offertes de la part de certains autres investisseurs pour un montant total de €44 millions (y compris : (i) Stichting APG Developed Markets Equity Pool pour un montant de €30 millions, (ii) RobecoSAM AG et Optiverder B.V. lex deux pour un montant de €5 millions et (iii) deux autres investisseurs lex deux pour un montant de €2 millions). Ces investisseurs (ensemble : les **Investisseurs-Clés**) seront intégralement attribués pour un montant total de € 64 millions. Chaque Investisseur clé qui souscrit à l'Offre pour un montant d'au moins 5 million d'euros se verra attribuer 1 warrant pour 4 actions souscrites, donnant le droit d'acquérir 1 action par warrant avec un prix d'exercise s'élevant à 125% du prix de l'Offre (les **Warrants**). Les warrants ont une maturité de 5 ans après la date de règlement et peuvent être exercés 2 ans après la date de règlement. Les Investisseurs-Clés recevront un nombre total de 1,249,998 Warrants, pour autant que tous les engagements et intentions fermes résultent en un octroi des Actions Offertes aux Investisseurs-Clés. Les Warrants ne seront quotés sur aucun marché boursier. **Convention de prise ferme – Conditions suspensives** La Société, la Fondation Avantium et les Preneurs fermes concluront une Convention de prise ferme au titre de l'Offre à la date de la fixation du prix et de l'allocation. Les obligations qui incombent aux Preneurs fermes en vertu de la Convention de prise ferme sont soumises à : (i) l'exécution de la Convention de prêt des Actions, (ii) l'absence de toute détérioration significative des activités, du capital social, de la situation financière ou du résultat d'exploitation du Groupe, (iii) la réception, au plus tard à la Date de règlement des avis sur certains aspects légaux, remis par l'avocat concernant notamment la Société, le présent Prospectus et les Actions offertes, (iv) l'absence de circonstances qui exigeraient la publication d'un supplément au présent Prospectus, (v) la signature de documents se rapportant à l'Offre (par ex. la Convention de prêt d'Actions, des conventions de blocage et des lettres d'engagement des investisseurs), lesdits documents portant tous leurs effets, (vi) l'admission des Actions à la cotation et la négociation sur Euronext Amsterdam et Euronext Bruxelles, (vii) l'achèvement de la Conversion et de la Restructuration de capital, et (viii) certaines autres conditions de clôture ordinaires, dont l'exactitude des garanties offertes par la Société et la Fondation Avantium en vertu de la Convention de prise ferme, l'obtention de toutes les autorisations applicables de l'entreprise et le respect par la Société des obligations lui incombant en vertu de la Convention de prise ferme et des directives en matière de publicité. Les Chefs de file associés ont le droit de renoncer à la satisfaction de toutes ces conditions ou d'une partie d'entre elles. **Droit applicable et tribunaux compétents** Le présent Prospectus et l'Offre sont régis par le droit néerlandais. Tous les litiges survenant dans le cadre du présent Prospectus et de l'Offre seront soumis à la compétence non exclusive des tribunaux d'Amsterdam (Pays-Bas).
E.4	Intérêts pouvant influer sensiblement sur l'Offre	Certains Preneurs fermes, l'Agent de cotation et payeur et/ou leurs sociétés liées pourront à l'avenir effectuer périodiquement des opérations commerciales bancaires, des opérations bancaires d'investissement ainsi que des activités de conseil financier et activités connexes dans le cadre ordinaire de leurs activités avec la Société ou des parties qui leur sont liées, et pour lesquelles il(s)/elles pourrai(en)t avoir perçu et/ou percevoir à l'avenir des frais et commissions ordinaires. Par ailleurs, les Preneurs fermes et/ou leurs sociétés liées respectives pourraient à l'avenir détenir, dans le cadre ordinaire de leurs activités, des titres de la Société à des fins d'investissement. Cf. Chapitre 17 « Plan de distribution », rubrique 17.3 « Conflits d'intérêts potentiels ». À la suite des actions découlant dans les contextes décrits ci-dessus, les Preneurs fermes, l'Agent de cotation et payeur et leurs sociétés liées respectives peuvent avoir des intérêts qui peuvent diverger de ceux des investisseurs (potentiels) et du Groupe, voire leur être contradictoires. ING Participaties, indirectement contrôlée par ING, détient 13,8% des Actions à la date du présent Prospectus. Elle devrait rester l'un des Actionnaires majoritaires après l'Admission et

		posséder ainsi un intérêt économique indirect à la réussite de l'Offre. Par conséquent, ING Participaties peut avoir des intérêts divergeant des intérêts des investisseurs, voire conflictuels avec ceux-ci. À ce titre, ING a mis en place des procédures, par exemple les procédures dites de « murailles de Chine », fondées sur les règles, règlements et politiques internes visant à empêcher le partage d'informations et les conflits d'intérêts entre l'un(e) des sociétés, filiales, administrateurs et personnes de son groupe participant à ses activités de banque d'affaires et de gestion d'actifs. En outre, les Prêteurs CPC convertiront leurs Prêts convertibles en Actions à un prix de conversion de 75 % du Prix de l'Offre dans l'Offre. Les intérêts économiques des Prêteurs CPC dépendent entre autres de la réussite de l'Offre, du Prix de l'Offre et du futur prix auquel les Actions s'échangeront. Par conséquent, les Prêteurs CPC pourront avoir des intérêts divergents, voire conflictuels avec les intérêts de la Société.
E.5	Personne ou entité offrant de vendre des actions et convention de blocage	En vertu de conventions de blocage distinctes, les Actionnaires existants, les Prêteurs CPC et la Fondation Avantium ont convenu avec les Chefs de file associés que pendant une période de 180 jours après la Date de règlement, ils s'abstiendront, moyennant les exceptions ordinaires, d'émettre, d'offrir, de donner, de nantir, de vendre ou d'engager à vendre, toute option ou tout contrat d'achat, d'acheter une option ou un contrat de vente, d'accorder un droit d'option ou de contracter pour vendre, d'accorder un droit d'option ou de garantir d'acheter, de prêter ou transférer selon d'autres modalités ou céder, directement ou indirectement, des Actions ou des titres échangeables contre des Actions ou convertibles en celles-ci, ou de conclure tout autre accord de transfert d'une partie ou de la totalité, de l'une des conséquences économiques de la propriété des Actions, que ces transactions soient réglées contre livraison des Actions ou d'autres titres, en liquidités ou selon d'autres modalités (la Période de blocage ferme). Pendant une période de 180 jours après la Période de blocage ferme, les Actionnaires existants ne prendront aucune des mesures précédentes, moyennant les exceptions ordinaires, sans l'autorisation préalable des Chefs de file associés. Cette Convention de blocage se rapporte aux Actions et options qui sont détenues à la date du présent Prospectus par tous les Actionnaires existants et la Fondation Avantium et aux Actions acquises par les Prêteurs CPC en vertu de la convention des Prêts convertibles immédiatement après le Règlement. 15,839,879 Actions et 1,230,044 options seront soumises à une convention de blocage. Les exceptions ordinaires ont trait à la vente des Actions de la direction faisant partie de l'Offre, à la conclusion de la Convention de prêt d'Actions, à un transfert d'Actions à la suite de l'acceptation d'une offre publique d'achat, d'un transfert des Actions à des filiales de l'actionnaire et à une vente d'Actions en vertu de droits quelconques sur des titres existants à la date de la Convention de prise ferme ou de toute vente coordonnée. À la date du présent Prospectus et conformément au registre des actionnaires, aucune des Actions n'est grevée. La Société s'engage au titre de l'Offre à ne rien entreprendre en ce qui concerne ses titres pendant une durée de 365 jours après la Date de règlement, à limiter toute émission, tout prêt, toute offre et toute vente de ses titres, sans l'accord préalable écrit des Preneurs fermes, moyennant les exceptions ordinaires qui se rapportent entre autres à l'émission ou la vente des Actions offertes, à la Restructuration de capital ou à l'exercice d'options et à l'émission d'Actions en vertu des régimes d'intéressement des employés.
E.6	La dilution	Les participations des titulaires actuels des Actions qui sont assorties de droits de vote seront diluées à la suite de l'émission des Actions nouvelles émises dans le cadre de l'Offre. La dilution maximale pour ces titulaires d'Actions en vertu de l'émission des Actions nouvelles émises dans le cadre de l'Offre sera de 51%, après de la Convention des Prêts convertibles et dans l'hypothèse de l'émission de 10,756,114 Actions nouvelles émises dans le cadre de l'Offre (qui incluent les Actions découlant de l'exercice de l'option d'accroissement et les Actions découlant de l'exercice de l'option de surallocation). La dilution maximum de ces détenteurs d'actions augmenterait à 53% si tous les Warrants étaient exercés.
E.7	Estimation des dépenses facturées a l'investisseur par l'émetteur ou l'offreur	Sans objet ; la Société ne facturera aucune dépense aux investisseurs au titre de l'Offre.

4 RISK FACTORS

Before investing in the Offer Shares, prospective investors should carefully consider the risks and uncertainties described below, together with the other information contained in this Prospectus. The occurrence of any of the events or circumstances described in these risk factors, individually or together with other circumstances, could have a material adverse effect on the Group's business, results of operations, financial condition and prospects. The order in which risks are presented is not necessarily an indication of the likelihood of the risks actually materialising, of the potential significance of the risks or of the scope of any potential harm to the Group's business, results of operations, financial condition and prospects.

The risk factors are based on assumptions that could turn out to be incorrect. Furthermore, although the Group believes that the risks and uncertainties described below are the material risks and uncertainties concerning the Group's business and the Offer Shares, they are not the only risks and uncertainties relating to the Group and the Offer Shares. Other risks, facts or circumstances not presently known to the Group, or that the Group currently deems to be immaterial could, individually or cumulatively, prove to be important and could have a material adverse effect on the Group's business, results of operations, financial condition and prospects. The value of the Offer Shares could decline as a result of the occurrence of any such risks, facts or circumstances or as a result of the events or circumstances described in these risk factors, and investors could lose part or all of their investment.

Prospective investors should note that the risks relating to the Group, the Group's industry and the Offer Shares summarised in the Summary of this Prospectus are the risks that the Group believes are essential to an assessment by a prospective investor of whether to invest in the Offer Shares. However, as the risks that the Group faces relate to events and depend on circumstances that may or may not occur in the future, prospective investors should consider not only the information on the key risks summarised in the Summary of this Prospectus but also, among other things, the risks and uncertainties described below.

Prospective investors should read and carefully review the entire Prospectus and should reach their own views before making an investment decision with respect to any Offer Shares. Furthermore, before making an investment decision with respect to any Offer Shares, prospective investors should consult their financial, legal and tax advisers, and consider such an investment decision in light of their personal circumstances.

4.1 Risks relating to the Group's business and industry

The Group has incurred losses and negative operating cash flow and has an accumulated deficit. The Group anticipates that it will continue to incur losses for the foreseeable future and the Group may never achieve or sustain profitability.

The Group's catalysis research and development (**R&D**) services and systems business (**Catalysis**) has generated revenues and a positive adjusted EBITDA over the past years. Since 2007, the Group has made significant investments in its YXY Technology to catalytically convert plant-based sugars into biobased chemicals and plastics (**YXY Technology**) and its development projects in the area of renewable chemistry (**Renewable Chemistries**). As such, the Group has incurred negative operating cash flow and net losses since 2007, including net losses of €11.1 million, €14.4 million, €13.2 million in 2013, 2014, 2015 and €12.0 million for the nine-month period ended 30 September 2016, respectively. As of 30 September 2016, the Group had a negative net equity of €1.6 million.

The Group anticipates that it will continue to incur negative operating cash flow and losses for the foreseeable future as a result of (*inter alia*) substantial operational R&D costs and capital expenditures related to the continued development and expansion of its businesses, including the planned construction of pilot plants for Renewable Chemistries and the investments to be made by the Joint Venture (as defined below) with BASF.

No assurance can be given that the Group will ever achieve profitability, which could impair its ability to sustain operations or obtain any required additional funding. Even if the Group achieves profitability, it may not be able to sustain or increase profitability in subsequent periods, and it may suffer net losses and/or negative operating cash flows in subsequent periods.

It is possible that the Group will experience fluctuating revenues, results of operations and cash flows. If this is the case, period-to-period comparisons of financial results will not necessarily be meaningful, and results of operations in prior periods should not be relied upon as an indication of future performance.

See Chapter 11 "Business" for further details on the YXY Technology, Renewable Chemistries and Catalysis.

The Group's ability to generate profits from the YXY Technology depends mainly on the Joint Venture being able to successfully commercialise this technology.

The Group's largest asset, the YXY Technology, has been contributed to the joint venture in which Avantium holds a non-controlling interest of 49% and BASF holds 51% of the share capital (the **Joint Venture**). The main risks relating to the Joint Venture are further described in this Chapter under "Risks relating to the Joint Venture". For further details on the agreement in relation to the Joint Venture (**Joint Venture Agreement**), see Chapter 20 "General information", section 20.3 "Material contracts", under "Joint Venture Agreement".

The Group may not be able to successfully develop its R&D projects pursued in the Renewable Chemistries business, which may adversely affect the Group's business, financial condition, result of operations and prospects.

In recent years, Renewable Chemistries has initiated multiple projects, two of which currently have reached or are entering pilot plant stage: a project to develop a cost-competitive production process for high-purity glucose from non-food biomass, such as wood chips and bagasse (also called second generation feedstock) (**Project Zambezi**) and a project to produce Mono-Ethylene Glycol from glucose in a single-step instead of the currently existing multiple step production process (**Project Mekong**). Project Zambezi and Project Mekong are complementary to the YXY Technology, but are each a stand-alone project: the success of Project Zambezi or Project Mekong is not dependent on the success of the YXY Technology and *vice versa*. A third project of Renewable Chemistries is a project comprising the direct use of electricity in chemical processes including CO_2 conversion to chemicals which is in lab stage (**Project Volta**). For further details on these projects, see Chapter 11 "Business", section 11.4.2 "Renewable Chemistries". The Group's ability to successfully complete the pilot plant stage and enter into the commercial stage with these projects will be dependent on a number of factors, which are further discussed in the risk factor "*The Group could face technology scale-up challenges in its Renewable Chemistries business which could delay or prevent the further development and commercialisation of the Group's projects*".

The Renewable Chemistries business currently has six other projects at concept or lab stage. The further development of these projects will be dependent on additional uncertainties, such as the reproducibility of initial lab results, the level of proprietary innovation and process economics.

If the Group is unable to successfully develop its projects in the Renewable Chemistries business, this may adversely affect the Group's business, financial condition, result of operations and prospects.

In order to further develop or commercialise its R&D projects in the Renewable Chemistries business, collaboration with partners may be necessary. If the Group fails to enter into, maintain or successfully execute joint development agreements with partners for its R&D projects in the Renewable Chemistries business, it may not be able to develop and commercialise these projects.

In order to further develop and/or commercialise Project Zambezi, Project Mekong and Project Volta, as well as any of the concept stage or future R&D projects in its Renewable Chemistries business, the Group may decide to enter into joint development agreements with partners. The process of establishing these relationships may be difficult, time-consuming and involve significant uncertainty. Moreover, even if the Group establishes these relationships, it may be difficult for the Group to perform its obligations under such joint development agreements due to the inherent complexity and uncertainty of (early stage) development projects. Partners may seek to renegotiate or terminate joint development agreements due to unsatisfactory results, a change in business strategy, a change of control or other reasons. If the Group or its partners fail to fulfil any responsibilities under the joint development agreements in a timely manner, or at all, contractual disputes may arise and the development or commercialisation efforts related to these agreements could be delayed or terminated. The Group's ability to predict the success of these existing or potential joint development agreements is limited. In addition, any existing or future partner of the Group may not contribute sufficient time and resources to the joint development project, otherwise fail to perform its obligations under the joint development agreement or terminate a joint development agreement. If the Group or its partners fail to enter into or maintain these joint development agreements, or fail to perform their obligations under these agreements, the Group may not generate revenues from the Renewable Chemistries business which may harm its business, financial condition and/or results of operations.

The Group could face technology scale-up challenges in its Renewable Chemistries business which could delay or prevent the further development and commercialisation of its projects.

The Group plans to build and operate pilot plants for its two leading Renewable Chemistries projects. The Group has successfully engineered the pilot plant in Geleen, the Netherlands for its YXY Technology (the **Pilot Plant**) and has gained experience by operating the Pilot Plant. However, the Group may encounter engineering issues and additional costs and may as such not be able to successfully build pilot plants for its Renewable Chemistries projects, and/or to manufacture any products which are developed in its Renewable Chemistries business in a timely or marketable manner. Should the Group decide to further expand beyond pilot plant scale for its Renewable Chemistries projects, it may face other challenges, such as the inability to attract the funds, facilities, expertise and staff required for such scale-up. To this end, the Group may seek to enter into joint development agreements with other parties, which may not be available on acceptable terms, or at all (see previous risk factor).

The Renewable Chemistries R&D projects may not perform as expected after a scale-up due to a variety of factors, including operational challenges for which the Group is unable to develop a workable solution or which may result in significant additional costs or could even prevent further development of such projects.

The Group cannot assure that it will be able to meet customers' requirements and expectations it its Catalysis business and may face cost overruns on its projects.

The Group may not be able to meet its customers' requirements and expectations, e.g. testing equipment provided by the Group does not function, catalyst test results provide customers with incorrect or insufficient information and/or catalyst or process conditions advised to and followed by such customers perform less than expected. In such circumstances, existing and potential customers may become reluctant to continue existing agreements or enter into new agreements with the Group. This could impair the Group's ability to sustain or expand the Catalysis business and reduce the Group's revenues and harm its business and results of operations.

Since most of the Group's projects in its Catalysis business' service projects and systems are offered at a fixed fee, the Group may also face cost overruns due to additional R&D laboratory manpower and machine hours above the budgeted time. This might adversely affect the results of operations of the Group.

The Group's Catalysis business is dependent on R&D spending and outsourcing by companies in the chemical, refinery and energy sector.

The Group's Catalysis business offers R&D services and systems to customers in the energy and chemicals industry. The success of these customer relationships depends on the ability and willingness of its customers to invest in, and/or outsource, its R&D. Over the past three years, over 90% of the Group's revenues were attributable to its Catalysis business.

In the past several years, many companies in the chemical, refinery and energy sector have experienced declining profitability due to several macro-economic factors, such as economic cycles affecting global supply and demand, geo-political factors, competition from low labour cost countries, more stringent environmental regulations and fluctuations in raw material prices including oil and natural gas. In addition, many chemical products have become commodity products which compete primarily on the basis of price. If declining profitability, commoditisation of chemical products and other developments affecting the energy and chemicals industry continue in the future, more companies could adopt strategies that involve significant reduction in spending or outsourcing of their R&D programs.

Although the Company believes that the Catalysis business can help companies in the chemical, refinery and energy industry increase the efficiency of their R&D activities and accelerate their time-to-market, the Group's efforts to convince them of this value may be unsuccessful. To the extent that such companies reduce their R&D spending and/or outsourcing, they could decide not to do business with the Group or they could reduce the value of the services procured from the Group, which could reduce the Group's revenues and harm its business and results of operations.

The Group's revenues from its Catalysis business are, for a large part, generated from a small number of large customers.

The Group's revenues from its Catalysis business are, for a large part, generated from a small number of large customers. In the period 2013-2015, circa 80% of the Group's order intake was generated on average from 36% of its total number of customers. As a result, if one or more of such large customers were to reduce their R&D spending and/or outsourcing, or would cease to do business with the Group for any reason, this could significantly reduce the Group's revenues, and harm its business, financial condition and results of operations.

The Group operates in highly competitive industries. If the Group's current or future competitors develop superior or alternative technologies, products or processes, the Group's competitive position and operations could be negatively impacted.

The Group operates in highly competitive industries. The Group's success largely depends on maintaining an overall competitive position. Companies in the chemical, refinery and energy industry, academic organisations and research and governmental institutions are actively involved in similar activities. Reference is made to Chapter 11 "Business", section 11.4 "Businesses" under "Competition" for an overview of the main competitors of the Group and the Joint Venture in the field of YXY Technology, and of the Group in the field of Renewable Chemistries and Catalysis.

Current or future competitors may succeed in developing competing technologies, products or processes more rapidly or more cost-efficient than the Group. If these competitors develop technologies, products or processes that are more effective or less expensive than the Group's technologies, products or processes, and/or if the Group fails to keep up or keep ahead of the market developments, the Group's technologies, products and processes could become non-competitive or obsolete. For example, the Group might not be able to adapt its technology to new applications and new chemistries required by its customers, partners or development programs, or competitors may obtain competitive advantages in terms of cost or customer or supplier relations. Moreover, there is no assurance that competitors will not obtain patent protection or other intellectual property rights that could make it difficult or impossible for the Group to further develop or commercialise its products.

Moreover, the Group competes with companies that may be more experienced in the commercialisation of technologies, products or processes. In addition, many of these competitors have substantially larger financial and other resources than the Group, allowing them to compete more aggressively and sustain competition over a longer period of time. Some of these competitors may also compete with the Group in acquiring proprietary or complementary technologies in the field of renewable chemistry.

Any of the above could harm the Group's competitive position, its business, financial condition and results of operations.

If the Group is unable to adequately protect its proprietary technology, products and processes, information, trade secrets and know-how this could have a material adverse effect on its business.

The Group substantially relies on proprietary technology, information, trade secrets and know-how to conduct its business and to develop its technologies, products and processes. In this respect, the Group has protected its business through an extensive patent portfolio. 40 out of the 47 published patent families relating to the YXY Technology have been transferred or licensed to the Joint Venture have been transferred or licensed to the Joint Venture. Reference is made to Chapter 11 "Business", section 11.5 "Intellectual property".

The success of the Group's business depends, to a large extent, on its ability to continue to protect its intellectual property portfolio, to obtain patents without infringing the proprietary rights of others and to successfully challenge any infringements by others. If the Group is not able to do so, the Group's business, financial condition and results of operations could be harmed.

Patent applications by the Group may not result in patents being granted, or may result in patents only being granted for certain claims, or patents can be nullified after being granted, thereby limiting the scope of protection of the Group's intellectual property portfolio.

Several patent applications for Project Zambezi and Project Mekong have recently become public. The Company cannot assure whether patents are granted nor predict whether third parties will challenge these applications and what the outcome of any such challenge will be. For more information regarding the publication of patents, see Annex "Overview of Patents".

Even if the Group is able to obtain patents covering its technology, products and processes, the patents may be challenged, circumvented, invalidated or unenforceable. Competitors may develop similar technologies or design around patents issued to the Group or other intellectual property rights of the Group. Competitors would then be able to offer technologies, products and processes which compete directly with the Group's technologies, products and/or processes. In that case, the Group's business, financial condition and results of operations could be harmed.

The Group also seeks to protect its technology, products and processes in part by confidentiality agreements with its customers, partners, prospects, employees, suppliers and consultants, and by limiting broad access to its proprietary technologies, products and processes to such parties. However, confidentiality agreements might be breached by any of these parties (including by current or former employees of the Group) and, in that event, the Group might not have adequate remedies in case of such breach. Further, the Group's know-how and trade secrets might otherwise become known, or be independently discovered, by competitors. Unauthorised disclosure (e.g. by employees leaving the Group) of know-how and trade secrets could enable the Group's competitors to use some of the Group's proprietary technologies. This could harm the Group's competitive position and could cause its revenues and results of operations to decline.

This risk factor also applies *mutatis mutandis* to the YXY Technology, which has been contributed to the Joint Venture.

Litigation or third party claims of intellectual property infringement could require substantial time and money to resolve and may result in liability for damage. Unfavourable outcomes in these proceedings could limit the Group's intellectual property rights and could prevent it from commercialising its technologies, products and processes.

The Group may become involved in litigation to enforce or defend its intellectual property rights. For instance, if a competitor, supplier, customer or partner files a patent application in respect of technology invented by the Group then, in order to protect its rights, the Group may have to participate in an opposition or similar proceeding before the European Patent Office, the US Patent and Trademark Office or any other patent authority in any jurisdiction, which could be expensive and time-consuming.

Although the Group undertakes extensive and continuous research in order to monitor proprietary technology of third parties and its freedom to operate (i.e. that it does not infringe any third party patent), it cannot guarantee that there will be no claims from third parties alleging that the Group's technologies, products or processes infringe their intellectual property rights. Third parties may assert that the Group is employing their intellectual property without authorisation and they may initiate litigation to attempt to enforce their rights. Third parties may have or obtain patents and claim that the use of the Group's technology, or any of its products, materials or processes, infringes their patents. The Group may not be able to develop or commercialise products, materials or processes because of patent protection of third parties. The Group's business may be harmed if it cannot obtain a necessary or desirable licence, if it obtains such a licence on terms the Group considers to be unattractive or unacceptable, if the Group is unable to redesign its technologies, products or processes to avoid actual or potential patent or other intellectual property infringement or if it is unsuccessful in invalidating a third party patent.

Suppliers, customers, prospects or partners may furthermore claim ownership of intellectual property rights developed by the Group based on the Group's contractual relationship with such party. In the Catalysis business, the Group generally seeks patent protection for inventions in respect of its R&D technology, hardware, software and research and other methodologies. Customers generally obtain the intellectual property rights related to products and processes which originate pursuant to, or in connection with, services rendered by the Group to them. There may be overlaps between these two categories that could potentially lead to a dispute with a customer regarding the ownership of intellectual property rights.

The Group may enter into joint development agreements in respect of its Renewable Chemistries business. Although the Group will generally seek to agree to unrestricted use of the joint intellectual property rights and use of the partner-owned intellectual property for its R&D activities, it may not be successful in the negotiations. As a result, the use of joint intellectual property by the Group may be restricted, or may require written consent from, or a separate agreement with, the partner and the Group may not obtain R&D use rights for partner-owned intellectual property which may adversely affect the Group's development of new chemistries and the commercialisation thereof.

Furthermore, efforts to obtain, protect and defend the Group's patents and other intellectual property rights, whether the Group is successful or not, can be expensive and may require the Group to incur substantial costs, including the diversion of management and technical personnel.

An unfavourable ruling in patent or intellectual property litigation could expose the Group to significant liabilities to third parties, require it to cease developing, manufacturing or selling the affected technologies, products or processes, require it to cease using the affected processes, require it to license the disputed rights from third parties, or result in an award of substantial damages against it. During the course of any intellectual property litigation, there may be public announcements of the results of hearings, motions and other interim proceedings or developments in the litigation. If analysts or investors regard these announcements as negative, the market price of the Shares may decline.

Any significant intellectual property impediment to the Group's ability to develop and commercialise its technologies, products and processes, including the scenarios described above, could have a material adverse effect on the Group's business, financial condition and/or results of operations.

This risk factor also applies *mutatis mutandis* to the YXY Technology, which has been contributed to the Joint Venture.

The Group's business can be disrupted due to fire and explosions or due to natural calamities and other disasters.

The Group uses a laboratory infrastructure, chemical processes and materials in its business that can partially or entirely disrupt its operations in case of a fire, explosion, leakage of chemicals or gases, intoxication or other calamity. Although the Group operates under a safety management system (see Chapter 11 "Business", section 11.8 "Corporate social responsibility"), it cannot guarantee that no calamities shall occur.

Currently the production of YXY Technology's main building block, FDCA, operates from the Pilot Plant and the Catalysis and Renewable Chemistries businesses operate from the facility at the Company's address in Amsterdam. Therefore, in case of a calamity at either or both of these locations, all of the Group's operations, including those of the Joint Venture, are at risk. In addition, the Group uses and works with new materials and processes that may have properties and conditions that are not yet fully understood. Therefore, the safest manner in which to handle such materials may still be unknown, which may further increase the risk of a calamity.

The Group is also vulnerable to damage from natural disasters and other types of disasters or calamities, including power loss, attacks from extremist organisations, fire, floods and similar events. If any disaster were to occur, the Group's ability to operate its business could be seriously impaired. The Group's operations may also be disrupted by calamities at third parties' facilities in the vicinity of the Group's operations. For example, in November 2015, a fire destroyed a logistics company's site on the Chemelot Industrial park in Geleen, the Netherlands, at which campus the Pilot Plant for the YXY technology is also situated. The Group's employees in the Pilot Plant had to be evacuated and activities at the Pilot Plant had to be discontinued for a limited period of time.

The Group currently has insurance in place to cover damages (including lost revenues) resulting from business interruptions caused by such disasters or calamities. However, any significant losses that are not recoverable under the Group's insurance policies or any interruptions in the operations of the Group could impair its business and operating profits (e.g. replacement would take over a year if the lab infrastructure and equipment of the Group would be destroyed).

This risk factor also applies to the Reference Plant which will be operated by the Joint Venture.

The Group uses limited amounts of hazardous substances in its business, and could be subject to potentially significant liabilities as a consequence of any claims relating to improper usage, handling, storage or disposal of these substances by the Group.

The Group's business involves the use of limited amounts of hazardous substances. Environmental laws impose stringent civil and criminal penalties for improper use, handling, disposal and storage of these hazardous materials. In addition, in the event of an improper or unauthorised release of, or exposure of individuals or goods to, hazardous substances, the Group could be subject to civil damages due to personal injury or property damage (including soil contamination) caused by the release or exposure.

A failure to comply with environmental laws could result in administrative and/or criminal enforcement on the Group (such as administrative orders or fines) and the suspension or revocation of the Group's environmental permits, which could hinder or prevent the Group from conducting its business. Accordingly, any violation of environmental laws or failure to properly use, handle, store or dispose of hazardous substances could result in restrictions on the Group's ability to operate its business, and/or could result in potentially significant costs for the Group relating to personal injuries, property damage or environmental clean-up and remediation, which could have a material adverse effect on the Group's business, financial condition and/or results of operations.

This risk factor also applies *mutatis mutandis* to the YXY Technology, which has been contributed to the Joint Venture.

Failure to obtain or maintain regulatory approvals or permits could adversely affect the Group's operations.

While the Group believes that it operates under all necessary permits and approvals for its current business and operations, including the Pilot Plant, it must obtain and maintain regulatory approvals and permits in order to expand and operate existing facilities, or to build and operate future facilities to further develop its Renewable Chemistries business. The Chemelot chemical cluster in Geleen where the Pilot Plant is located operates under a so-called umbrella environmental permit covering a wide spectrum of chemical activities, including the activities of the Group. The chemical cluster of BASF in Antwerp where the Reference Plant will be located has a similar umbrella permit.

However, the Group or such chemical clusters may not always be able to obtain and maintain regulatory approvals or obtain and maintain modifications to existing regulatory approvals. Obtaining and maintaining necessary approvals and permits could be a time-consuming and expensive process, and the Group may not be able to obtain them on a timely basis or obtain or maintain them at all. Failure to timely obtain or maintain any necessary permits may force the Group to delay operations and the receipt of related revenues or abandon a project and lose the benefit of any development costs already incurred. In addition, governmental regulatory requirements may substantially increase capital expenditure if the Group has to comply with increasingly stringent environmental, health, food and safety laws, regulations and permits, on an on-going basis. Any of the above could have a material adverse effect on the Group's business, results of operations and financial condition.

The Group's operations may be restricted or limited because of amendments to relevant legislation or environmental permits and approvals.

The Group operates under several permits relating to its business, such as environmental permits (*omgevingsvergunningen*) and, regarding the Joint Venture, a permit approving the use of certain nuclear substances in the operations of its business. These permits contain several conditions relating to environmental aspects such as noise- and odour-emissions, external safety, soil contamination, water and waste management and energy efficiency.

Both the legislation and the permits themselves can be subject to amendments. For example, environmental laws can be amended to include stricter conditions for certain environmental aspects. New regulations may be created, which could impose more stringent requirements on, or even ban, the usage, handling, disposal and storage of the hazardous substances used by the Group. In some cases environmental laws, regulations and/or permits provide for a continuous obligation to comply with the most recent standard (such as the obligation in environmental permits to comply with certain best available techniques). Further, external influences, such as developments in the vicinity of one of the Group's facilities, may have a restricting effect on that facility. Amendments to existing legislation and permits, or the creation of new regulations, could require material changes to the Group's operations which could result in additional or higher costs or lower revenues for the Group.

This risk factor also applies *mutatis mutandis* to the YXY Technology, which has been contributed to the Joint Venture.

The Group faces liability exposure related to its technologies, products and processes which may harm its business and reputation.

The Group faces a risk of liability resulting from law suits against the Group, related to its business. Any person may bring a liability claim against the Group if one of its products, materials, processes or services causes, or appears to have caused, an injury, damage or loss. Furthermore, the Group may incur liability for errors in its scientific or licensing documentation, or for a misunderstanding of, or inappropriate reliance upon, the information provided by or on behalf of the Group to customers and licensees. If the Group cannot successfully defend itself against such liability claims, it may incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in the following outcomes for the Group:

- decreased demand for its services, products, materials or processes;
- injury to its reputation;

- significant litigation costs;
- substantial monetary awards paid to, or costly settlements with, customers or licensees;
- loss of revenue;
- the inability to commercialise products, materials or processes; and/or
- the diversion of managements' attention from managing the business.

The Group has a liability insurance in place which it currently believes is adequate to cover liabilities it may incur. However, the Group's current or future insurance coverage may prove insufficient to cover any liability claims brought against the Group. Because of the increasing costs of insurance coverage, the Group may not be able to maintain insurance coverage at reasonable costs or obtain insurance coverage that will be adequate to satisfy any liability that may arise.

Any of the foregoing could have a material adverse effect on the business, financial condition, results of operations and prospects of the Group.

This risk factor also applies *mutatis mutandis* to the YXY technology, which has been contributed to the Joint Venture.

The Group relies on the skills and expertise of its key personnel and consultants, and might be unable to attract and retain qualified personnel.

The Group believes that its performance, success and ability to fulfil its objectives are dependent, to a large extent, on retaining its current managing directors and senior managers (**Senior Management**), technical and scientific personnel and consultants and on the Group's ability to attract and retain other highly skilled personnel. Whilst the Group has entered into employment agreements or consultancy agreements with its key management, technical and scientific personnel with the aim of securing their services, the retention of these personnel cannot be guaranteed and the Group's management and other employees may voluntarily terminate their employment at any time with short notice.

The Group has endeavoured to ensure that its employees receive suitable incentives. However, there is competition for skilled personnel and the retention of such personnel or the recruiting of new highly qualified employees on acceptable terms cannot be guaranteed.

In addition, the Group may have to rely on consultants and advisors to assist in the execution of the Group's development programs. Such consultants and advisors may be employed by third parties or may have commitments under consulting or advisory agreements with third parties that may limit their availability to the Group.

The loss of key personnel, the failure to attract new highly qualified and experienced employees, or the limited availability of consultants or advisors could have a material adverse effect on the Group's business, financial condition and the results of operations.

The Group's information technology systems could face serious disruptions that could adversely affect its business.

The Group's information technology and other internal infrastructure systems, including databases, data management systems, computers, electronic lab hardware, internally developed software for operating its Catalysis R&D systems, laboratory information management systems, corporate firewalls, servers, leased lines and connection to the internet, face the risk of systemic failure that could disrupt the Group's operations.

Despite security measures and back-up systems put in place by the Group, the information technology and infrastructure of the Group may be vulnerable to attacks by hackers, computer viruses or malicious code, or may be breached due to employee error, malfeasance or affected by other disruptions, including as a result of natural disasters, telecommunications breakdown or other reasons beyond the Group's control. If one or more such events occur, it could cause disruptions or delays to the Group's operations and result in the loss of confidential information, which could expose the Group to liability and cause its business and reputation to suffer. Any of the foregoing could have a material adverse effect on the Group's business, results of operations, financial condition and prospects.

The application of the Innovation Box regime for Dutch tax purposes is uncertain, which may adversely affect the effective tax rate of the Tax Group.

For Dutch corporation tax purposes, the tax group (*fiscale eenheid*) headed by Avantium (the **Tax Group**) currently applies the Innovation Box to its Catalysis intangible assets (**IP assets**) (70% of the Catalysis EBIT is allocated to the Innovation Box). Furthermore, the Tax Group assumes it can benefit from the Innovation Box with respect to future income from its Renewable Chemistry IP assets in the same manner (expectation to apply the Innovation Box to 70% of the Renewable Chemistry EBIT).

No advance confirmation from the Dutch tax authorities regarding the application of the Innovation Box to either the Catalysis IP assets or the Renewable Chemistry IP assets has been obtained. Therefore, there is a risk that the Dutch tax authorities do not agree with the (method of) allocation of taxable income to the Innovation Box, potentially resulting in a higher than expected effective tax rate.

The Tax Group annually obtains a large amount of R&D statements, however it also holds a substantial amount of patents (see Chapter 11 “Business”, section 11.5 “Intellectual property”). Furthermore, virtually all R&D activities are being conducted in the Netherlands by employees of the Tax Group. To the extent that the Tax Group relies on R&D statements for the application of the Innovation Box, whilst it cannot benefit from the SME regime, there would be a (limited) risk that the revised Innovation Box regime, as set out below, may have a negative impact on the expected effective tax rate.

This risk factor also applies *mutatis mutandis* to the YXY technology, which has been contributed to the Joint Venture. Particularly to the extent that R&D-activities would be outsourced by the Joint Venture to other taxpayers within the group, there is a risk that the recent amendments to the Innovation Box regime (as described below) may have a negative impact on the expected effective tax rate.

Developments Intellectual Property regimes and revised Dutch Innovation Box regime

In an international context, the application of Intellectual Property regimes have been subject to discussion. The OECD Report on Base Erosion and Profit Shifting, Action 5 prescribes *inter alia* a ‘(modified) nexus approach’ in relation to Intellectual Property regimes, such as the Dutch Innovation Box. Based on Action 5 of the OECD BEPS-project, as per 1 January 2017, amendments were introduced to the Innovation Box regime. Under the revised Innovation Box regime, a distinction should be made between (a) small and medium-sized companies (**SMEs**) and (b) other taxpayers.

<u>SMEs:</u>
SMEs are defined as taxpayers (i) deriving benefits from qualifying intangible assets of less than € 37,500,000 in the respective financial year and the four preceding financial years combined, and (ii) also having a net turnover of less than € 250,000,000 in the respective financial year and the four preceding financial years combined. If the taxpayer is part of a group of companies the second test is applied to the turnover of the total group. Qualifying intangible assets for SMEs are self-developed intangible assets from R&D activities for which R&D statements from the competent Dutch governmental agency have been obtained.

<u>Other taxpayers:</u>
Qualifying intangible assets for other taxpayers are self-developed intangible assets from R&D activities for which R&D statements from the competent Dutch governmental agency have been obtained, and which intangible assets - as an additional condition – should also qualify under a specific category of intangible assets, such as patents, plant breeder's rights, software programs and other specific similar (more legal) rights.

Under the revised Innovation Box regime, the qualifying income should in principle be determined per qualifying intangible asset, or – if this is not reasonably possible – per coherent group of qualifying intangible assets. The same methods for determining the qualifying income as used under the pre-2017 Innovation Box regime remain applicable. Any qualifying income determined on this basis may under the new Innovation Box regime however be limited if, and to the extent that, a taxpayer has outsourced part of its R&D activities to a company within its group.

The new rules for the Innovation Box apply to financial years commencing on or after 1 January 2017. The pre-2017 Innovation Box regime in principle continues to apply to qualifying intangible assets developed before 30 June 2016 during a grandfathering period. This grandfathering rule is applicable up to and including financial years ending before 1 July 2021. Another grandfathering rule will apply to intangible assets developed before 1 January 2017 and for which only a patent or plant breeder’s right has been obtained (i.e. no R&D statements were issued).

4.2 Risks relating to the Joint Venture

The decision to proceed with the construction of the Reference Plant is subject to certain conditions and each of Avantium and BASF may exercise its exit right resulting in a winding up of the Joint Venture prior to a positive decision to construct the Reference Plant. No assurance can be given that the Reference Plant will be completed on schedule or within budget or at all.

The Joint Venture intends to build a plant in Antwerp, Belgium for the commercial production of FDCA up to 50,000 ton scale (the **Reference Plant**). The Joint Venture Agreement provides for certain decision moments, including a decision on plant capacity based on, amongst others, market assessment, customer feedback, process cost assessment and technology scaling aspects. The Joint Venture aims for a final investment decision (**FID**) in the fourth quarter of 2018 to construct the Reference Plant and to approve the associated capital expenditures. A positive FID will depend on the viability of the business case of the Joint Venture, based on a range of factors including basic engineering and technical feasibility, supply chain agreements and a final financing plan ensuring sufficient cash flow for the duration of the Joint Venture. The construction of the Reference Plant is expected to take over 24 months and the Reference Plant is expected to be operational in 2021. No assurance can be given with respect to the construction of the Reference Plant.

Until the FID each of Avantium and BASF shall have the right to exit and withdraw from the Joint Venture as a consequence of which the Joint Venture will be unwound and the Joint Venture Agreement may be terminated in accordance with its terms. See Chapter 20 “General Information”, section 20.3 “Material contracts”, under “Joint venture agreement with BASF” for a summary of the main terms of the Joint Venture Agreement.

Once the decision on the construction of the Reference Plant has been taken, no assurance can be given that the Reference Plant will be completed on schedule or within the intended budget, or at all. The Group has successfully engineered and constructed the Pilot Plant and has gained experience by operating this plant. BASF, as Joint Venture partner, will contribute valuable expertise and experience to the Joint Venture. However, the Reference Plant is the world’s first commercial scale FDCA production plant, which neither the Group nor the Joint Venture has ever built. In building the Reference Plant, construction delays or cost overruns may be suffered, which may be significant as a result of a variety of factors, such as labour and material shortages, defects in materials and workmanship, adverse weather conditions, transportation constraints, construction change orders, site changes, labour issues and other unforeseen difficulties, or the Joint Venture may encounter operational challenges for which the Joint Venture partners are unable to develop a workable solution or which may result in significant additional costs or could even prevent completion of the Reference Plant. While it is envisaged that the Joint Venture will negotiate contracts with engineering, procurement and construction firms that minimise risk, any delays or cost overruns encountered may result in the renegotiation of construction contracts, which could increase the construction costs for the Joint Venture. Any additional costs to construct the Reference Plant may require the Group to make additional capital contributions to the Joint Venture.

If construction and commissioning of the Reference Plant takes longer than expected, the Joint Venture may not be able to meet the demands of (potential) customers and customer relationships which may hamper and/or delay the commercialisation of FDCA and PEF products. To the extent customer demand is lower than expected, or if the intended operational utilisation of the Reference Plant is not otherwise met, the Joint Venture may face an increase of costs per tonne which could adversely affect the Joint Venture’s business and results of operations or delay dividend or Earn-out payments by the Joint Venture to the Group.

The Group does not control the Joint Venture and the interests of BASF may conflict with the interests of the Group which may have an adverse impact on the value of the Joint Venture.

Avantium holds a non-controlling 49% interest in the Joint Venture. The Group’s ability to receive dividends and Earn-out payments from the Joint Venture depends not only on its cash flows and profits, but also on the terms of the Joint Venture Agreement. Under the Joint Venture Agreement, the Group does not retain complete control over all decisions with respect to the operation and management of the Joint Venture.

The managing partner of the Joint Venture (the **Managing Partner**) has two statutory directors, one of which is nominated by BASF and the other by the Group, as long as the Group holds an interest in the Joint Venture of at least 25%.

The supervisory board of the Joint Venture consists for 50% of members nominated by each of the Group and BASF. Decisions of the supervisory board are in principle taken by a majority of the votes of all members which shall include the vote of at least one member of the supervisory board appointed by Avantium and one member of the supervisory board appointed by BASF. In case of a dead lock, Avantium or BASF may request that such matter shall be submitted to the general meeting of the Managing Partner or partners meeting of the Joint Venture.

Following the FID, decisions in the general meeting of the Managing Partner or partners meeting of the Joint Venture shall in principle be made by simple majority. This entails that BASF has control in such general meeting, including in respect of deadlocks. This does not apply in relation to certain reserved matters, which shall require the affirmative vote of each partner holding an interest of at least 25% in the Joint Venture, and include (without limitation) (i) an amendment of any constitutional documents of the Joint Venture (e.g. the Managing Partner’s articles of association), (ii) changing the authorised or issued capital of the Joint Venture and (iii) issuance of securities convertible into equity.

In respect of all other decisions in the general meeting of the Joint Venture, including in respect of matters on which the management board or the supervisory board could not reach consent, BASF will have a decisive vote. BASF may have interests which are inconsistent with the objectives of the Group. This could have a material adverse effect on the profitability of the Joint Venture.

BASF may provide a portion up to 50% of the required debt financing to the Joint Venture by means of a shareholder loan. BASF’s interests in its capacity as a lender to the Joint Venture may not necessarily align with the Joint Venture’s interests or the interests of the Group e.g. BASF may have an interest in calling certain loans, especially if BASF has rights of lien, mortgage or other rights to the Joint Ventures assets.

Further, any revenues from the Joint Venture will only result in results for the Group in so far as the Group will receive Earn-out payments resulting from Licences (as defined below) being sold by the Joint Venture and dividends paid by the Joint Venture. The Group does not have full control over whether such payments can and will be made to the Group.

Any of the above could harm the Group’s business, its financial condition and the results of its operations.

See Chapter 20 "General Information", section 20.3 "Material contracts", under "Joint venture agreement with BASF" for a summary of the main terms of the Joint Venture Agreement.

The YXY Technology may not perform as expected at the planned scale at the Reference Plant and FDCA produced at the Reference Plant or PEF produced by third parties may not meet the required product quality standards or specifications.

If and when the Reference Plant becomes operational, the YXY Technology contributed by the Group to the Joint Venture may not perform as expected when applied at the planned scale at the Reference Plant and/or by third parties polymerising the FDCA to PEF (on behalf of the Joint Venture), due to a variety of factors, including operational challenges for which the Joint Venture or its partners are unable to develop a workable solution or which may result in significant additional costs or could even prevent production of FDCA at sufficient volumes and in sufficient quality. If the FDCA produced at the Reference Plant, or PEF produced by third parties (on behalf of the Joint Venture), does not meet the required product quality standards, this may have an adverse impact on the demands of (potential) customers and customer relationships and may hamper the commercialisation of FDCA and PEF products. The same could apply if the FDCA and/or PEF produced by third parties (under a Licence) do not meet the required product quality standards or specifications. Any of these failures could adversely affect the Joint Venture's business and results of operations or delay dividend or Earn-out payments by the Joint Venture to the Group.

The Joint Venture may not be able to obtain the financing required to construct and operate the Reference Plant or not on favourable conditions.

It is estimated that the construction of the Reference Plant with an expected production capacity of 50 kta FDCA will cost approximately €275-325 million, including start-up costs and initial working capital needs. Circa 50% of the costs are expected to be financed through debt. The Joint Venture could deviate from this debt ratio, for example if another mix of capital would benefit the business. A deviation is subject to unanimous shareholder approval. The required third party debt financing may not be available on terms favourable to the Joint Venture, or at all, which may cause a delay in the construction of the Reference Plant or require the Group and BASF to seek alternative financing arrangements or to make additional capital contributions to the Joint Venture and Avantium may, in agreement with BASF, accept the consequence of diluting its shareholding in the Joint Venture (see also above under "*The decision to proceed with the construction of the Reference Plant is subject to certain conditions and each of Avantium and BASF may exercise its exit right resulting in a winding up of the Joint Venture prior to a positive decision to construct the Reference Plant. No assurance can be given that the Reference Plant will be completed on schedule or within budget or at all."* and Chapter 6 "Reasons for the Offering and Use of Proceeds", section 6.2 "Use of proceeds).

The commercial success of the Joint Venture will depend on the market acceptance of PEF and PEF products and the Joint Venture's ability to sell FDCA, PEF and Licences, which may only become clear once the Reference Plant becomes operational.

PEF is currently not used commercially but is intended to replace existing, proven materials currently in use. Therefore, to gain market acceptance and successfully market PEF, the Joint Venture must effectively demonstrate the (commercial) advantages of using PEF over other materials, as well as its ability to produce PEF reliably on a commercial scale at a certain cost.

A key component of the Joint Venture's business strategy is to enter into agreements with purchasers of FDCA or PEF and to sell product, manufacturing and/or application licences (**Licences**). The Joint Venture has already started marketing activities and is in particular seeking to develop market demand for FDCA and PEF. In first instance, the Joint Venture intends to focus on markets for high-value PEF applications and specialties in the food and beverages packaging industry, leveraging (i) the unique properties of PEF and (ii) the sustainability profile of PEF.

The Reference Plant is expected to be operational in 2021. These or other parties may postpone signing binding agreements regarding the sale of FDCA, PEF and/or Licences until after the Reference Plant has become operational. No assurance can be given that firm commitments with these or other parties regarding the sale of FDCA, PEF and/or Licences will be agreed upon and whether such commitments can be agreed on terms favourable for the Joint Venture. Also, it cannot be guaranteed that commercial relations with such parties can be maintained. A failure to manage such relations could delay or prevent the Joint Venture from commercialising the YXY Technology. If the Joint Venture is not able to commercialise the YXY Technology by selling FDCA and PEF and selling Licences of the YXY Technology to third parties to produce and use FDCA and/or PEF, this would negatively affect the Group's business, financial position and its future profitability.

Obtaining market acceptance in the chemical and polymer markets is complicated by the fact that many potential customers have invested substantial amounts of time and money in developing petroleum-based production channels. Although certain chemical process steps of the YXY Technology can be performed in existing (in some cases retrofitted (e.g. petroleum-based production equipment modified to fit new production processes)) facilities, the Joint Venture's ability and opportunities to sell Licences to third parties will as such also depend, to a large extent, on the decision of chemical companies to invest in and/or operate FDCA and PEF production plants. Restrictions in technical and economic feasibility, general economic conditions, decreased customer demand or the availability of alternative products could negatively impact any such decision.

The chemical and polymer markets are highly competitive and price sensitive. If prices of PET remain low, this could adversely affect the Joint Venture's ability to successfully commercialise the YXY Technology.

The chemical and polymer markets are highly competitive and the end markets (in particular the packaging industry) are price sensitive. Petroleum prices have a significant impact on the price of many currently widely used packaging materials. If the PET prices remain low, the prices of such packaging materials may remain relatively low compared to that of PEF, making it more difficult to enter into the packaging markets, especially the higher volume markets with relatively low prices. The Joint Venture also intends to enter the latter markets on the long term.

The Joint Venture is dependent on the supply and availability of fructose syrup feedstock at certain required specifications. The inability to obtain such feedstock in sufficient quantities or in a timely or cost-effective manner may limit the Joint Venture's ability to produce. Fluctuations in the prices of feedstock could further impact the Joint Venture's chance for successful commercialisation.

The Joint Venture uses fructose syrup feedstock for the YXY Technology. Substantial amounts of this feedstock (approximately 100 kta for a 50 kta plant) will be required for the operation of the Reference Plant. The prices of commodities, including fructose syrup, are prone to fluctuations and have shown fluctuations in the past. The future prices of fructose syrup could unexpectedly increase, for instance as a result of usage of such materials for other applications. This could cause the Joint Venture's revenues and results of operations to decline.

The price, supply and availability of fructose syrup are dependent on a number of factors, including land availability for agriculture, crop yields, transportation costs, energy prices, prices for side-products, trade barriers, competition with food production, competition for water resources, use of fertilisers and pest control, conflict with conservation of biodiversity and environmental or food and feed regulations. If the supply and availability of fructose syrup were disrupted or were not available at the required specifications, this would reduce the Joint Venture's chance of successful commercialisation of the YXY Technology.

The fructose syrup currently made from corn or wheat, which are also used for food and feed production (so-called first generation feedstock; as opposed to second generation feedstock which comes from non-food sources, such as wood chips). Concerns regarding, or actual shortage in the world supply or higher prices of, food and/or negative publicity around the use of first generation feedstock for non-food purposes may lead to an increase in the prices of feedstock or impact the availability of feedstock, which could reduce the Joint Venture's chance for successful commercialisation of the YXY Technology and may negatively affect the Group's business, financial position and its future profitability.

Uncertainty as to the consequences of the liberalisation of the sugar market may influence the feedstock prices.

In the European Union (**EU**) a single common market organisation is in place for agricultural products such as sugar (*inter alia* sugar beet and sugar cane). The current market contains a system where the production of sugar is related to quota and minimum prices, as set out in EU Regulation 1308/2013 establishing a common organisation of the markets in agricultural products (**CMO-Regulation**). This system applies to producers/growers of sugar in the EU.

In 2006, a reform of the agricultural system was agreed upon, which *inter alia* included a liberalisation of the EU sugar market. As per 30 September 2017, the quota for the production of sugar and the minimum price for sugar will be discontinued.

Plant-based sugar (high fructose syrup) is a main ingredient for the production of PEF. The end of the minimum prices and production quota may have a material effect on the price of sugar as well as the availability of sugar. This may have a negative effect on the Joint Venture if the price of sugar increases or the supply of sugar decreases, and may negatively affect the Group's business, financial position and its future profitability.

Food contact materials developed by the Group may not gain regulatory market approval in the EU and/or the United States.

In the EU a system of pre-market approval applies for all new materials that (in their finished state) will be, are intended to be or are reasonably expected to be in contact with food (including drinks). The pre-market approval for new food contact materials is aimed to avoid that food contact materials endanger human health, bring unacceptable changes to the (composition of the) food it is in contact with or brings about a deterioration in the organoleptic characteristics (*i.e.* the aspects of food, water or other substances that an individual experiences via the senses) thereof. The rules governing this system are based on EC Regulation 1935/2004 on materials and articles intended to come into contact with food, which is implemented in other EU legislation, such as the Plastics Regulation, relating to food contact plastics (defined below). Also national legislation can impose stricter rules than is provided for in EU legislation. The Joint Venture, as well as purchasers of FDCA, are subject to this legislation as certain of their products are (in whole or in part) intended to (eventually) come into contact with food.

For plastics, a specific regulation has been adopted that pertains to the use of plastics as a food contact material. EC Regulation 10/2011 on plastic materials and articles intended to come into contact with food (the **Plastics**

Regulation) provides for a list of plastics that are authorised for use as food contact material. For a material to be added to this list an amendment of the (annex to the) Plastics Regulation is required. Such amendment must be preceded, for specific plastic food contact materials, by a safety assessment of the European Food Safety Authority (the **EFSA**) as described below.

For FDCA, a scientific opinion dated 25 February 2015 was adopted by EFSA (replacing its earlier scientific opinion on the same matter of 20 October 2014). This opinion contains a safety assessment of FDCA for the use as a monomer with ethylene glycol to produce PEF-polymer. The EFSA comes to the conclusion that FDCA does not raise a safety concern for the consumer when the substance is used as a monomer in the production of PEF polymer and the migration of the substance itself does not exceed 5 mg/kg food. However, the EFSA imposed certain restrictions on the use of FDCA relating to the maximum migration level set by the EFSA. The limits were set based on 20% ethanol tests, which were considered to be more representative and still conservative for the intended use. The potential impact of these restrictions might be the following (from low to high impact): (i) end-users may have to build a dossier to prove that PEF in their application(s) complies with the restrictions, (ii) the Group may have to support end-users to build that dossier or (iii) end-users or the Group may have to initiate a request to change the Plastics Regulation.

FDCA is included in the Plastics Regulation as a food contact material by the sixth amendment to the Plastics Regulation of 24 August 2016 (1416/2016). The European Commission included the restrictions proposed by EFSA in its scientific opinion referred to above. The exact (technical) limitations and restrictions for FDCA are included in *Table 1* of *Annex 1* of the Plastics Regulation).

The sixth amendment to the Plastics Regulation (including FDCA in the list of approved food contact materials) entered into force on 14 September 2016. If FDCA is further developed in the future for other uses than included (and restricted) in the Plastics Regulation, another amendment to the (annex of the) Plastics Regulation will be required.

The request for clearance for the use of PEF in the United States to the Food and Drugs Administration through Food Contact Notifications (**FCN**) has not yet been initiated. The procedure in United States differs from the EU approach, where the polymer formulation is subject to clearance and not the monomer. The process for completing the FCN review has a strict time limit of 120 days and once the FCN becomes effective, the polymer may be lawfully used for the specific applications. Importantly, in contrast to the EU clearances, the FCN are proprietary to the notifier or manufacturer and are specific for the final manufacture process. The Company expects that it will request clearance for the use of PEF in the United States in 2018.

If one or more of the authorisations to use FDCA or PEF (or any other product manufactured by the Joint Venture) in the EU or the United States cannot be obtained, or not without limitations, this could be potentially harmful or even prohibitive for the expected production and commercialisation of FDCA and PEF and may negatively affect the Group's business, financial position and its future profitability.

Reluctance with respect to the recycling of PEF may adversely affect the successful commercialisation of the YXY Technology.

The Group is closely collaborating with its partners and the recycling community**,** including the European PET Bottle Platform (**EPBP**), to find the optimum end-of-life solutions for PEF. Technical data demonstrates that PEF to PEF recycling is feasible. Experiments to determine the compatibility of PEF with PET recycling show that adding approximately 5% of PEF to the recycled PET stream under the current protocols has no material impact on mechanical and physical properties of recycled PET. Should the portion of PEF in the existing PET recycling stream exceed 5% of the total amount, the Group expects that this will be sufficient to qualify for a separate PEF recycling stream.

In addition, PEF bottles and PEF film could be recycled into PEF fibres. However, although technical data has demonstrated the feasibility of PEF recycling, the recycling community may be reluctant to recycle PEF, for example, because of the novelty of the product, the investment required, unfamiliarity with the chemical properties of the product in the recycling process. Reluctance with respect to the recycling of PEF may adversely affect the successful commercialisation of the YXY Technology and could adversely affect the Joint Venture's business and results of operations.

An increase in energy costs or a disruption in the supply of energy for the operations of the Joint Venture may significantly increase the Joint Venture's operational costs or adversely affect its business.

The main energy sources used for the operations of the Joint Venture are natural gas, electricity and steam. Fluctuations in energy costs (which may be market-driven or government-driven) may impact the Joint Venture's business, financial condition and results of operations. Part of the energy needed for the production of FDCA by the Joint Venture is intended to be generated by incinerating bio-oils (a side-product of the YXY Technology) in dedicated furnaces. The ability to use bio-oils as an energy source could have a mitigating effect on the impact of energy price fluctuations. The Joint Venture may decide to hedge its energy costs. However, these measures may not be sufficient to eliminate the effects of increases in energy costs. If the Joint Venture is unable to pass on an increase in energy costs to its customers, the Joint Venture's business and results of operations may be adversely affected.

In addition, any disruption in the supply of energy may impair the Joint Venture's ability to conduct its business and meet customer demands and may have an adverse effect on its results of operations. Since the number of energy suppliers is generally limited, the Joint Venture may not be able to negotiate favourable terms for its energy supply agreements and/or the Joint Venture may be required to accept significant increases in the costs of its energy purchases when negotiating renewal terms for its energy supply agreements.

The Joint Venture will be partly dependent on third parties for the availability of the environmental permit for the Pilot Plant.

The Joint Venture's Pilot Plant operates under an environmental 'umbrella permit', held by Chemelot Site Permit B.V., which is part of the lease agreement regarding the Pilot Plant (and includes the terms and conditions made applicable to this lease agreement). As neither the Group nor the Joint Venture is the holder of such permit, there is a risk that the Joint Venture may not be able to operate under this permit if the permit holder (Chemelot Site Permit B.V.) does not comply with the permit or does anything that otherwise gives rise to a suspension or revocation of the permit. The Joint Venture will, in such case, have to either obtain its own permit or enforce its rights under the relevant terms and conditions of the lease agreement, or otherwise seek compensation. This can be a time-consuming and costly process and may impact the Joint Venture's business, financial condition and results of operations.

A change of control over either Avantium or BASF may trigger the option for the other party to sell its equity interest in the Joint Venture.

Subject to the terms of the Joint Venture Agreement, in the event of a change of control by which certain parties acquire direct or indirect control over either Avantium or BASF, the other party shall have an option to sell its equity interest in the Joint Venture to the party subject to the change of control.

Avantium does not have any anti-takeover measures in place. Consequently, even without the support of the Management Board and Supervisory Board, a third party may be able to make a successful public takeover offer for the Shares and acquire control over Avantium. In case such party acquires control over Avantium, it may exert its power to block a purchase by Avantium of the BASF's equity interest in the Joint Venture upon an exercise of the option by BASF (e.g. because the business of the Joint Venture does not fit within the strategy of the party triggering the change of control or the required financing for the acquisition of the equity interest is not available on favourable terms or at all). Following a rejection to purchase BASF's equity interest in the Joint Venture, BASF will have the right to require the liquidation and dissolution of the Joint Venture. Although the YXY Technology will remain with the Group, the liquidation and dissolution of the Joint Venture could adversely affect the successful commercialisation of the YXY Technology and could harm the Group's business, its financial condition and the results of its operations.

See Chapter 20 "General Information", section 20.3 "Material contracts", under "Joint venture agreement with BASF" for a summary of the main terms of the Joint Venture Agreement.

4.3 Risks relating to financial matters

Government grants and subsidies are subject to uncertainty, which could harm the Group's business and results of operations.

The Group has received various government grants and subsidies (see Chapter 10 "Operating and Financial Review", section 10.3 "Key factors affecting the Group's results of operations and financial condition", under "Operating costs"). The Group may seek to obtain government grants and subsidies in the future to offset (a portion of) its R&D expenses. However, it is uncertain whether the Group will be able to secure any such government grants or subsidies. In addition, any of the Group's existing or new grants and/or subsidies may be terminated, modified or recovered by the granting governmental body.

The Group may also be subject to audits by government agencies as part of routine audits of the Group's activities that are funded by grants and subsidies. As part of an audit, these agencies may review the Group's performance, cost structures and compliance with applicable laws, regulations and standards. Funds available under grants must be applied by the Group toward the R&D programs specified by the granting agencies, rather than for all of the Group's programs generally. If any of the costs are found to be allocated improperly, the grant may be revoked, the costs may not be reimbursed and any costs already reimbursed may have to be refunded. Accordingly, an audit could result in a negative adjustment to the Group's revenues and results of operations and could harm the Group's business and financial condition.

The Group may not obtain the additional financing it may need in order to grow its business, develop or enhance its technologies, products and processes and to further develop and commercialise biobased chemicals.

The net proceeds of the Offering alone, together with future cash flows from operations (if any), may not be sufficient for the Group to grow its business, develop or enhance its technologies, products and processes or further develop and commercialise biobased chemicals and therefore the Group may need to raise additional funds in the future. Any required additional financing may not be available on acceptable terms, or at all. The Group's ability to secure financing and the cost of raising such capital are dependent on numerous factors, including general economic and capital markets conditions, credit availability from lenders, investor confidence and the existence of regulatory and tax incentives that are conducive to raising capital. If the Group is unable to raise additional funds, obtain capital on acceptable terms, secure government grants or co-sponsorships for some of the Group's projects or take advantage of public incentive programs to secure favourable financing, the Group may have to delay, modify or abandon some or all of its development programs, which could harm the Group's business, its financial condition and the results of its operations.

The Group's inability to obtain any additional funds necessary to operate its business could materially and adversely affect the market price of the Shares.

The Group may not be able to meet the requirements under financial covenants in its finance agreements.

The Group's credit facility with ABN AMRO Bank N.V. currently contains a financial covenant that the Group's solvency ratio (based on the Group's tangible net worth) must at all times represent at least 35% of the Group's (adjusted) balance sheet total. All of the Group's assets, excluding the intangible assets and the finance lease assets, are pledged to the bank. Even though the Group complies with the financial covenant at this moment, the Group's performance in the future may not be sufficient to meet this covenant or any covenants in future finance agreements. If a breach of this covenant is not remedied, or remedied in a timely manner, the debts owed by the Group to ABN AMRO Bank N.V., whether or not payable, contingent or absolute, may become payable. At such time, the Group's liquidity position or ability to refinance may not be sufficient to fund such repayment obligation or any obligation to provide additional cash collateral. Moreover, if the Group's debt has become due and payable and the Group continues to be in default, ABN AMRO Bank N.V. may seize and execute the pledged goods if necessary for the payment of the debt that the Group owes to the bank. All this might have an adverse effect on the Group's business and financial condition. The same may apply to other financing arrangements, should the Group in the future attract additional third party debt financing.

Exchange rate fluctuations could have a material adverse effect on the Group's business, financial condition and results of operations.

At 31 December 2015, the Group had outstanding trade receivables of US$266k (2014: US$343k) and outstanding trade payables of US$14k (2014: US$219k, of which US$17k related to the YXY Technology). The Group had no trade receivables or trade payables in other foreign currencies. At 31 December 2015, if the currency had weakened by 10% against the US dollar with all other variables held constant, post-tax result for the year would have been €13k higher (2014: €53k higher) as the cash position included US$135k. At 30 September 2016, the Group had outstanding trade receivables of US$12k and outstanding trade payables of US$106k and GB£10k and furthermore no trade receivables or trade payables in other foreign currencies. At 30 September 2016, if the currency had weakened by 10% against the US dollar with all other variables held constant, post-tax result for the year would have been €4.5k higher as the cash position included US$45k.

On the dates mentioned above, the Group had no cash position in other foreign currencies (see also Chapter 10 "Operational and Financial Review", section 10.3 "Key factors affecting the Group's results of operations and financial condition").

The Group operates internationally and has a policy to negotiate commercial transactions in euros. However, in certain circumstances, subject to Management Board approval, the Group may enter into contracts denominated in other currencies. As a result, the Group is exposed to foreign exchange rate risk, primarily with respect to the US Dollar, and exchange rate fluctuations could have a negative effect on the Group's business, financial condition and results of operations (see Chapter 10 "Operating and Financial Review", section 10.3 "Key factors affecting the Group's results of operations and financial condition", under "Foreign currency risk").

4.4 Risks relating to the Offering and the Shares

Following the Offering, the Company's largest Shareholders will be in a position to exert substantial influence on the Company and the interests pursued by these Shareholders could differ from the interests of the Company's other Shareholders.

Following the Offering, the Company's largest Shareholders will be Sofinnova (11.0%), Stichting APG Developed Markets Equity Pool (10.2%) Capricorn (9.3%), PMV (8.5%), ING Participaties (7.6%), and Aescap (6.3%) (assuming the issuance of 8,133,168 New Offer Shares and full exercise of the Increase Option and the Over-Allotment Option). As a result, these Shareholders may, when acting in concert with one or more other (large) Shareholders, be in a position to exert substantial influence at the General Meeting and, consequently, over matters decided by the General Meeting, including the appointment of members of the Management Board and Supervisory Board.

Furthermore, since attendance at the General Meeting is a prerequisite for voting, even if a large Shareholder, acting in concert with one or more other (large) Shareholders, would not otherwise have sufficient votes to pass or block a Shareholder resolution, it might (depending on the level of attendance of other Shareholders at the General Meeting) nonetheless have sufficient votes to block or pass measures at a particular General Meeting without the concurrence of other Shareholders and/or delay, postpone or prevent transactions.

In any of the above instances, the interests of one or more large Shareholders could deviate from the interests of the Company's other Shareholders.

The free float of Shares is expected to remain limited for at least a period of 180 days after Settlement due to the applicable lock-up arrangements which may have a negative impact on the liquidity of and market price for the Shares.

It is expected that, immediately after completion of the Offering, 34% of the Shares will be publicly held by investors who are not subject to any lock-up arrangements assuming the issuance of 10,756,114 New Offer Shares (which includes the Increase Shares and the Over-Allotment Shares). 66% of the Shares will be held by the Company's existing Shareholders and CLA Lenders who have entered into lock-up arrangements under which these Shareholders agree not to dispose of their Shares for a period of 360 days, with the right of the Joint Global Coordinators to waive the lock-up after a period of 180 days (**Lock-Up**) (see Chapter 17 "Plan of Distribution", section 17.4 "Lock-up arrangements and stand-still"). These lock-up arrangements relate to the Shares held at the date of this Prospectus by all existing Shareholders and the Avantium Foundation and the Shares acquired by the CLA Lenders pursuant to the conversion of the Convertible Loans immediately after Settlement. The Shares subject to the lock-up arrangements represent 59% of the total number of Shares assuming the issuance of 10,756,114 New Offer Shares (which includes the Increase Shares and the Over-Allotment Shares). Therefore, the free float of the Shares is expected to remain limited for at least a period of 180 days after Settlement. This may have a negative impact on the liquidity of the Shares and may result in a low trading volume, which could adversely affect the then prevailing market prices for the Shares.

Future sales or the possibility of future sales of a substantial number of Shares by the major Shareholders may adversely affect the market price of the Shares.

Following the Offering, 59% of the Shares (assuming the issuance of 10,756,114 New Offer Shares (which includes the Increase Shares and the Over-Allotment Shares)), which Shares are owned by the Company's existing Shareholders and CLA Lenders, are subject to a Lock-Up period of 360 days. However, the Underwriters may waive the lock-up after a period of 180 days (see Chapter 17 "Plan of Distribution", section 17.4 "Lock-up arrangements and stand-still"). This could result in the existing Shareholders selling substantial numbers of their Shares in the public market after 180 days, in case of a waiver, or else after 360 days after Settlement. In addition, there could be a perception in the market that such sales could occur due to the expiry of the applicable Lock-Up period or its waiver. Any of these circumstances may adversely affect the market price of the Shares. In addition, such sales could make it more difficult for the Company to raise capital through the issuance of equity securities in the future.

Future offerings of debt or equity securities by the Company may adversely affect the market price of the Shares and may dilute investors' shareholdings.

The Management Board, subject to the approval of the Supervisory Board, will be authorised by the General Meeting to issue Shares for a period of 18 months after the Settlement Date. Pursuant to this designation, the Management Board may resolve to issue Shares or grant rights to subscribe for Shares (i) up to a maximum of 10% of the total number of Shares issued and outstanding on the Settlement Date for unspecified purposes plus (ii) an additional 10% of the total number of Shares issued and outstanding on the Settlement Date in connection with or on the occasion of mergers and acquisitions and strategic alliances and (iii) up to a maximum of 10% in connection with an incentive plan, stock ownership plan and/or any comparable plan, subject to the approval of the Supervisory Board. Such authorisation may from time to time be extended by a resolution of the General Meeting for a period not exceeding five years.

Until 365 days after the Settlement Date and subject to certain exceptions, the Company may not issue, offer or otherwise enter into transactions relating to its securities (including the Shares) without the prior written consent of the Joint Global Coordinators (see Chapter 17 "Plan of Distribution", section 17.4 "Lock-up arrangements and stand-still").

The Group may in the future seek to raise capital through public or private debt or equity financings by issuing additional Shares, debt or equity securities convertible into Shares or rights to acquire these securities and exclude the pre-emptive rights pertaining to the then outstanding Shares. In addition, the Group may in the future seek to issue additional Shares as consideration for or otherwise in connection with the acquisition of new businesses. The issuance of any additional Shares, in connection with plans to raise additional capital, acquisitions or otherwise, may dilute a Shareholder's interest in the Company. Furthermore, any additional debt or equity financing may not be available on terms favourable to the Group or at all, which could adversely affect the Group's future plans and the market price of the Shares. Any additional offering or issuance of Shares by the Company, or the public perception that an offering or issuance of Shares may occur, could also have a negative impact on the trading price of the Shares and could increase the volatility in the trading price of the Shares.

There is a risk that an active and liquid market for the Shares will not develop and the price of the Shares may be volatile.

Prior to the Offering, there has been no public trading market for the Shares. There can be no assurances that an active trading market for the Shares will develop after the Offering or, if it does develop, that it will be sustained or liquid. If such market fails to develop, or be sustained, this could negatively affect the liquidity and price of the

Shares, as well as increase the price volatility of the Shares. Investors may not be in a position to sell their Shares quickly or at the market price if there is no active trading in Shares and/or a market for the Shares fails to develop.

After the Offering, the market price of the Shares could fluctuate substantially due to various factors such as fluctuating revenues, results of operations and cash flows of the Group resulting from the licensing fee model of the Joint Venture and possibly insufficient news flow to investors and potential investors in the period until the operation of the Reference Plant, or thereafter. Other factors could be related to the industry in which the Group operates, or equity markets generally, as described under “Risks relating to the Group’s business and industry”.

As a result of these and other factors, the Shares may trade at prices significantly below the Offer Price. There can be no assurance that the market price of the Shares will not decline, and the Shares may trade at prices significantly below the Offer Price, regardless of the Group’s actual operating performance.

Fluctuations in revenues and other income generated by the Joint Venture for the Group can have a material impact and may lead to volatility of the Group’s share price.

The Group’s ability to generate revenues and other income from the YXY Technology depends mainly on whether the Joint Venture will be able to successfully commercialise this technology by selling products and Licences to third parties. Income from Licences can be volatile which may have a material impact on the financial performance of the Group and may lead to volatility in the price of the Shares.

If securities or industry analysts do not publish research, or publish inaccurate or unfavourable research, about the Company’s business, the price and/or trading volume of the Shares could decline.

The trading market for the Shares will depend, in part, on the research and reports that securities or industry analysts publish about the Company and its business. If too few securities or industry analysts commence and maintain coverage of the Company, the trading price for the Shares would likely be materially and adversely affected. In the event securities or industry analysts initiate coverage, if one or more of the analysts who cover the Company downgrade the Shares, or publish inaccurate or unfavourable research about the business, the price of the Shares could decline. If one or more of these analysts cease coverage of the Company, or fail to publish reports on it regularly, demand for the Shares could decrease, which might cause the price of the Shares and trading volume to decline.

The Company does not intend to pay dividends for the foreseeable future and its ability to pay dividends in the foreseeable future is uncertain.

The Company does not intend to pay any dividends to its Shareholders for the foreseeable future and its ability to pay dividends in the foreseeable future is uncertain. Payment of future dividends to Shareholders will effectively be at the discretion of the Management Board, subject to the approval of the Supervisory Board, after taking into account various factors including the Group’s business prospects, cash requirements, financial performance and progress of its development programs. In addition, payment of future dividends may be made only if the Company’s shareholders’ equity exceeds the sum of its called up and paid-in share capital plus the reserves required to be maintained under Dutch law and the Articles of Association. Accordingly, investors cannot rely on dividend income from the Shares and any returns on an investment in the Shares will, for the foreseeable future, likely depend entirely upon any future appreciation in the price of the Shares.

Investors with a reference currency other than euro will become subject to certain foreign exchange risks when investing in the Shares.

The Company’s equity capital is denominated in euro, and all dividends on the Shares, if any, will be paid by the Company in euro. Investors whose reference currency is a currency other than the euro may be adversely affected by any reduction in the value of euro relative to the respective investor’s reference currency. In addition, such investors could incur additional transaction costs in converting euro into another currency.

If closing of the Offering does not take place, purchases of the Offer Shares will be disregarded and both Euronext Amsterdam and Euronext Brussels may annul transactions that have occurred.

Application has been made to list the Shares on Euronext Amsterdam and Euronext Brussels under the symbol “AVTX”. The Company expects that the Shares will be admitted to listing on Euronext Amsterdam and Euronext Brussels and that trading in the Offer Shares will commence prior to the Settlement Date, on the First Trading Day, on an “as-if-and-when-issued/delivered” basis. The closing of the Offering may not take place on the Settlement Date, or at all, if certain conditions or events referred to in the underwriting agreement is expected to be dated 14 March 2017 among the Company and the Underwriters (the **Underwriting Agreement**) are not satisfied or waived or occur on or prior to such date (see Chapter 16 “The Offering”, section 16.9 “Delivery, clearing and Settlement”).

Trading in the Offer Shares before the closing of the Offering will take place subject to the condition that, if closing of the Offering does not take place, the Offering will be withdrawn, all applications for the Offer Shares will be disregarded, any allotments made will be deemed not to have been made, any application payments made will be returned without interest or other compensation and transactions on both Euronext Amsterdam and Euronext Brussels will be annulled. All dealings in the Offer Shares prior to settlement and delivery are at the sole risk of the parties concerned. The Company, the Underwriters, Euronext Amsterdam N.V. and Euronext

Brussels NV/SA do not accept any responsibility or liability for any loss incurred by any person as a result of a withdrawal of the Offering or the related annulment of any transaction on Euronext Amsterdam and Euronext Brussels.

5 IMPORTANT INFORMATION

5.1 General

Prospective investors are expressly advised that an investment in the Shares entails certain risks and that they should therefore carefully review the entire contents of this Prospectus. A prospective investor should not invest in the Shares unless he or she has the expertise (either alone or with a financial adviser) to evaluate how the Shares will perform under changing conditions, the resulting effects on the value of the Shares and the impact this investment will have on the prospective investor's overall investment portfolio. Each prospective investor should also consult his or her own stockbroker, bank manager, lawyer, auditor or other financial, legal or tax advisers before making any investment decision with regard to the Offer Shares, to among other things consider such investment decision in light of his or her personal circumstances and in order to determine whether or not such prospective investor is eligible to subscribe for the Offer Shares.

The contents of this Prospectus are not to be considered or interpreted as legal, financial or tax advice. In making an investment decision, prospective investors must rely on their own examination, analysis and enquiry of the Company and the terms of the Offering, including the merits and risks involved, in light of their personal circumstances. The Underwriters are a party to various agreements pertaining to the Offering and each of the Underwriters may enter into financing arrangements with the Company or the Group, but this should not be considered as a recommendation by any of them to invest in the Shares.

Potential investors should rely only on the information contained in this Prospectus and any supplement to this Prospectus within the meaning of Section 5:23 FSA. The Company does not undertake to update this Prospectus, unless required pursuant to Section 5:23 FSA, and therefore potential investors should not assume that the information in this Prospectus is accurate as of any date other than the date of this Prospectus. No person is or has been authorised to give any information or to make any representation in connection with the Offering, other than as contained in this Prospectus, and, if given or made, any other such information or representations must not be relied upon as having been authorised by the Company, the members of the Management Board or Supervisory Board, any of the Underwriters or any of their respective representatives. The delivery of this Prospectus at any time after the date hereof will not, under any circumstances, create any implication that there has been no change in the Group's business of affairs since the date hereof or that the information set forth in this Prospectus is correct as of any time since its date of issue.

No representation or warranty, express or implied, is made or given by or on behalf of the Underwriters or any of their affiliates or any of their respective directors, officers or employees or any other person, as to the accuracy, completeness or fairness of the information or opinions contained in this Prospectus, and nothing in this Prospectus is, or shall be relied upon as, a promise or representation by the Underwriters or any of their respective affiliates as to the past or future. None of the Underwriters accepts any responsibility whatsoever for the contents of this Prospectus or for any other statements made or purported to be made by either itself or on its behalf in connection with the Company, the Group, the Offering or the Shares. Accordingly, the Underwriters disclaim, to the fullest extent permitted by applicable law, all and any liability, whether arising in tort or contract or which they might otherwise be found to have in respect of this Prospectus and/or any such statement.

The Underwriters and the Listing and Paying Agent are acting exclusively for the Company and for no one else in connection with the Offering and the trading in the Shares. They will not regard any other person (whether or not a recipient of this Prospectus) as their respective customers in relation to the Offering and will not be responsible to anyone other than the Company for providing the protections afforded to their respective customers or for giving advice in relation to, respectively, the Offering and the listing or any transaction or arrangement referred to herein.

In connection with the Offering, each of the Underwriters and any of their respective affiliates, acting as an investor for its own account, may take up Offer Shares in the Offering and in that capacity may retain, purchase or sell for its own account any Offer Shares or related investments and may offer or sell such Offer Shares or other investments otherwise than in connection with the Offering. Accordingly, references in this Prospectus to the Offer Shares being offered or placed should be read as including any offering or placement of Offer Shares to any of the Underwriters or any of their respective affiliates acting in such capacity. In addition, certain of the Underwriters or their affiliates may enter into financing arrangements (including swaps) with investors in connection with which such Underwriters (or their affiliates) may from time to time acquire, hold or dispose of Shares. None of the Underwriters intends to disclose the extent of any such investment or transactions otherwise than in accordance with any legal or regulatory obligation to do so.

ING has also been engaged by the Company as Listing and Paying Agent for the Shares, in relation to the admission of the Shares to trading on Euronext. The Listing and Paying Agent's activities consist essentially of filing the application for admission to trading with Euronext and paying sums due on the Shares. The Listing and Paying Agent is acting for the Company only and will not regard any other person as its client in relation to the Offering. Neither the Listing and Paying Agent nor any of its directors, officers, agents or employees makes any representation or warranty as to the accuracy, completeness or fairness of the information or opinions described in this Prospectus, in any investor report or for any other statements made or purported to be made either by itself or on its behalf in connection with the Company or the Offering or the Shares. Accordingly, the Listing and

Paying Agent disclaims all and any liability, whether arising in tort or contract or otherwise in respect of this Prospectus and or any such other statements.

5.2 Responsibility statement

This Prospectus is made available by the Company. The Company accepts sole responsibility for the information contained in this Prospectus. The Company declares that it has taken all reasonable care to ensure that, to the best of its knowledge, the information contained in this Prospectus is in accordance with the facts and does not omit anything likely to affect its import.

5.3 Potential conflicts of interest

Certain of the Underwriters, the Listing and Paying Agent and/or their respective affiliates may in the future, from time to time, engage in commercial banking, investment banking and financial advisory and ancillary activities in the ordinary course of their business with the Company or any parties related to any of them, in respect of which they have received and/or may in the future receive customary fees and commissions. Additionally, the Underwriters and/or their respective affiliates may in the future hold, in the ordinary course of their business, the Company's securities for investment purposes. See Chapter 17 "Plan of Distribution", section 17.3 "Potential conflicts of interest". As a result of acting in the capacities described above, the Underwriters, the Listing and Paying Agent and their respective affiliates may have interests that may not be aligned, or could possibly conflict with the interests of (prospective) investors and the Group's interest.

ING Participaties, which is indirectly controlled by ING, holds 13.8% of the Shares at the date of this Prospectus and is expected to remain one of the major Shareholders following Admission, resulting in an indirect economic interest in the success of the Offering. Consequently, ING Participaties may have interests that may not be aligned, or could possibly conflict with the interests of investors. In respect thereof, ING has procedures in place, such as Chinese walls procedures based on rules and regulations and internal policies to prevent the sharing of information and any conflicts of interest between any of its group companies, affiliates, directors and employees engaged in its merchant banking activities and in its asset management activities.

Furthermore, the CLA Lenders will convert their Convertible Loans into Shares at a conversion price of 75% of the Offer Price in the Offering. The economic interest of the CLA Lenders depends on *inter alia* the success of the Offering, the Offer Price and future trading price of the Shares. As a result, the CLA Lenders may have an interest that may not be aligned, or could potentially conflict, with the interest of the Company.

5.4 Presentation of financial and other information

This Prospectus contains the following Financial Information:

- the audited consolidated financial statements of the Group as at and for FY 2015, FY 2014 and FY 2013, which should be read in conjunction with the accompanying notes thereto and the auditor's report thereon (the **FY Financial Information**). The FY Financial Information has been prepared in accordance with IFRS as adopted by the European Union (**IFRS**) and has been audited by PricewaterhouseCoopers Accountants N.V. (**PwC**).
- the reviewed interim consolidated condensed financial statements of the Group as at and for the nine-month period ended 30 September 2016. These condensed interim financial statements should be read in conjunction with the accompanying notes thereto and the auditor's review report thereon (the **9M Financial Information**). The 9M Financial Information has been prepared in accordance with IAS 34 and the unaudited interim consolidated condensed financial statements of the Group as at and for the nine-month period ended 30 September 2016 have been reviewed by PwC.

The reports of the Management Board and the Supervisory Board are not included in Chapter 22 "Index to the Financial Statements". The information contained in these documents is either not relevant for investors or is covered elsewhere in this Prospectus.

The FY 2015 audited consolidated financial statements present the information for the YXY Technology as discontinued operations.

In order to present the financial information in this Prospectus consistently, the financial information for FY 2014 included in Chapter 9 "Selected Historical Financial Information" and Chapter 10 "Operating and Financial Review" is derived from the comparative information as included in the FY 2015 audited consolidated financial statements, which is different from the FY 2014 audited financial information due to the YXY Technology business which became a discontinued operation in 2015. The financial information for FY 2014 as derived from the FY 2014 audited consolidated financial statements is also included in Chapter 9 "Selected Historical Financial Information" which presents the YXY Technology business as continuing operations and the Pharma business as discontinued operations.

The financial information for FY 2013 included in Chapter 9 "Selected Historical Financial Information" is derived from the FY 2014 audited consolidated financial statements which presents the YXY Technology business as continued operations and the Pharma business as discontinued operations.

The expense categories in the consolidated statements of comprehensive income in the FY 2015 audited consolidated financial statements were changed to better reflect the actual expenses incurred and to align external reporting, with the intention to apply these expense categories going forward. In the financial information included in Chapter 9 "Selected Historical Financial Information" and Chapter 10 "Operating and Financial Review" for FY 2013 the expense categories have been amended in order to make these categories comparable to the FY 2015 expense categories.

Rounding and negative amounts

Certain figures in this Prospectus, including financial data, have been rounded. Accordingly, figures shown for the same category presented in different tables may vary slightly and figures shown as totals in certain tables may not be an exact arithmetic aggregation of the figures which precede them.

In tables, negative amounts are shown between brackets. Otherwise, negative amounts are shown by "-" or "minus" before the amount.

Currency

All references in this Prospectus to "euro" or "€" are to the single currency introduced at the start of the third stage of the European Economic and Monetary Union pursuant to the Treaty on the functioning of the European Community, as amended from time to time. All references to "US dollar" or "USD" are to the lawful currency of the US.

Non-IFRS financial measure

Chapter 10 "Operating and Financial Review" presents the adjusted EBITDA, which is not a recognised measure of financial performance under IFRS. The adjusted EBITDA is used by the Company to monitor the underlying performance of the Group's business and operations and, accordingly, has not been audited or reviewed. Further, the adjusted EBITDA may not be indicative of the Group's historical operating results, nor is meant to be predictive of the Group's future results. Adjusted EBITDA is presented in this Prospectus because the Company considers this an important supplemental measure of the Group's performance and believes that such measure is widely used in the industry in which the Group operates as a means of evaluating a company's operating performance.

5.5 Exchange rates

The Company publishes its historical consolidated financial statements in euro. The table below sets forth, for the periods and dates indicated, period average (the average of the closing exchange rates on the last business day of each month for annual averages and the average of the closing exchange rates on each business day during 2017 for the average in 2017 (through 2 March 2017)), high, low and period end exchange rates between the euro and the US dollar as published by Bloomberg, based on Bloomberg composite (BGN). This exchange rate information is solely provided for your convenience. The exchange rate of the euro on 2 March 2017 (the latest practicable date before publication of this Prospectus) was US$1.0507 = €1.00.

Date (calendar year)	Euro	US dollar (High)	US dollar (Low)	US dollar (Average)	US dollar (Period end)
2013	1	1.3802	1.2780	1.3285	1.3743
2014	1	1.3934	1.2098	1.3285	1.2098
2015	1	1.2104	1.0496	1.1102	1.0862
2016	1	1.1534	1.0388	1.1069	1.0517
2017 (through 2 March)	1	1.0798	1.0405	1.0628	1.0507

5.6 Market and industry information

All references to market share, market data, industry statistics and industry forecasts in this Prospectus consist of estimates compiled by industry professionals, competitors, organisations or analysts, of publicly available information or of the Group's own assessment of its sales and markets.

The third party reports referenced in this Prospectus include publicly available information and third party data. Third party reports referenced in this Prospectus include reports published by:

- International Energy Agency, *Resources to Reserves 2013*, 2013;
- Morgan Stanley *'Green is good' – The potential of bioplastics*, blue paper 2012;
- PriceWaterhouseCoopers, *Sustainable packaging: threat or opportunity?*, 2010;
- World Economic Forum, *The new plastics economy, Rethinking the future of plastics*, January 2016;
- U.S. Department of Energy, *Top value added chemicals from biomass*, August 2004;
- Weastra, s.r.o., *Determination of market potential for selected platform chemicals*, 2011;

- Eerhart, Faaij & Patel: *Replacing fossil-based PET with biobased PEF; process analysis, energy and GHG balance*, Energy & Environmental Science - Issue 4, 2012;
- Tecnon Orbichem, May 2016;
- Ellen Macarthur Foundation, *Towards a circular economy: business rationale for an accelerated transition*, November 2015;
- ISSN, *5-Hydroxymethylfurfural (5-HMF) Production from Hexoses: Limits of Heterogeneous Catalysis in Hydrothermal Conditions and Potential of Concentrated Aqueous Organic Acids as Reactive Solvent System*, 2012;
- RVO, *Market*, *developments and opportunities for biobased products and chemicals*, 2013;
- Cleantech Group, *Global '15 Cleantech 100 - A Barometer of the Changing Face of Global Cleantech Innovation*;
- Imperial College London, *Reducing CO_2 emissions from heavy industry: a review of technologies and considerations for policy makers*, 2012
- European Commission joint research centre, *Product environmental footprint (PEF) guide*, 2012;
- CIAA, *Managing Environmental Sustainability in the European Food & Drink Industry*, 2007;
- PlasticsEurope, *Plastics – the Facts 2013* (2013) and *the Facts 2015* (2015);
- IHS, *Chemical Economics Handbook PET Polymer*, May 2015;
- Nexant, *Petrochemical Market Dynamics Polyester & Intermediates*, December 2014;
- Smithers Pira, *The future of global metal packaging to 2017*, 2012;
- Canadean (2014), database with 2013 packaging information;
- IHS 2016: Bio-Based Furan Dicarboxylic Acid (FDCA) an Its Polymer Polyethylene Furanoate (PEF);
- AMI Consulting, *Global BOPET film market overview*, 2016;
- PA Consulting, *Supporting information on the synthetic fibre market*, 2015;
- Pesticides Action Network UK, Solidaridad and WWF, *Mind the gap: towards a more sustainable cotton market*; 2016;
- Technovio, *Global Packaging Film Market 2015-2019*;
- Nova-Institute, *Bio-based building blocks and polymers in the World*, 2015;
- Nova Institute: Nova-Institute, *Green Premium Prices Along the Value Chain of Biobased Products*, 2014;
- Nova Institute, *Global Bioeconomy in the conflict between biomass supply and demand*, 2015;
- FAO Food outlook, *biannual report*, June 2016
- Deloitte, *Opportunities for the fermentation-based chemical industry*, 2014;
- Corn naturally, *High Fructose Corn Syrup (HFCS) in the U.S. Caloric Sweetener Supply*, 2011;
- The World Bank, *A note on rising food prices*, 2008;
- USDA, *China biofuel industry faces uncertain future*, 2015;
- US Department of Energy: *Lignocellulosic Biomass for Advanced Biofuels and Bioproducts*, 2015;
- European Commission, *Prospects for sugar and isoglucose*, 2015;
- IEA Bioenergy, *Bio-based chemicals: value added products from bio refineries*, 2013; and
- Wittcoff, Reuben and Plotkin, *Industrial Organic Chemicals*, 2004.

Industry publications generally state that their information is obtained from sources believed to be reliable but that the accuracy and completeness of such information is not guaranteed and that the projections they contain are based on a number of significant assumptions. Where third party information has been sourced in this Prospectus, the source of such information has been identified. The information in this Prospectus that has been sourced from third parties has been accurately reproduced with reference to these sources in the relevant paragraphs and, as far as the Group is aware and able to ascertain from the information published by that third party, no facts have been omitted that would render the reproduced information inaccurate or misleading.

In this Prospectus, the Group makes certain statements regarding its competitive and market position. The Group believes these statements to be true, based on market data and industry statistics, but the Group has not independently verified the information. The Group cannot guarantee that a third party using different methods to assemble, analyse or compute market data or public disclosure from competitors would obtain or generate the same results. In addition, the Group's competitors may define their markets and their own relative positions in these markets differently than the Group does and may also define various components of their business and operating results in a manner which makes such figures non-comparable with the Group's.

5.7 Supplements

If a significant new factor, material mistake or inaccuracy relating to the information included in this Prospectus which is capable of affecting the assessment of the Offer Shares, arises or is noted between the date of this Prospectus and Settlement, a supplement to this Prospectus will be published and the Offering Period will be extended, if so required by the Prospectus Directive, the FSA or the rules promulgated thereunder. Such a supplement will be subject to approval by the AFM in accordance with Section 5:23 FSA, will be notified to the FSMA for passporting and will be made public in accordance with the relevant provisions under the FSA. Investors who have already agreed to purchase or subscribe for the Offer Shares before the supplement is published shall have the right, exercisable within two business days following the publication of the supplement, to withdraw their acceptances, provided that the new factor, material mistake or inaccuracy arose or was noted before the final closing of the Offering.

A supplement to this Prospectus will be published in the event the Offer Price is changed. Any increase of the Offer Price on the last day of the Offering Period will result in the Offering Period being extended by at least two business days; any increase of the Offer Price on the day prior to the last day of the Offering Period will result in the Offering Period being extended by at least one business day. Investors who have already agreed to purchase or subscribe for the Offer Shares before the supplement is published shall have the right, exercisable within two business days following the publication of the supplement, to withdraw their acceptances.

Statements contained in any such supplement (or contained in any document incorporated by reference therein) shall, to the extent applicable (whether expressly, by implication or otherwise), be deemed to modify or supersede statements contained in this Prospectus. Any statement so modified or superseded shall, except as so modified or superseded, no longer constitute a part of this Prospectus. For the avoidance of doubt, references in this paragraph to any supplement being published by the Company do not include the Offering Statement.

5.8 Notice to investors

The distribution of this Prospectus and the offer, acceptance, delivery, transfer, exercise, purchase of, subscription for, or trade in the Offer Shares may, in certain jurisdictions other than the Netherlands and Belgium, including, but not limited to, the United States, be restricted by law. Persons in possession of this Prospectus are required to inform themselves about, and to observe, any such restrictions. Any failure to comply with such restrictions may constitute a violation of the securities laws of any such jurisdiction. This Prospectus may not be used for, or in connection with, and does not constitute, an offer to sell, or an invitation to purchase, any of the Offer Shares in any jurisdiction in which such offer or invitation is not authorised or would be unlawful. Neither this Prospectus, nor any related materials, may be distributed or transmitted to, or published in any jurisdiction except under circumstances that will result in compliance with any applicable laws or regulations.

None of the Company, the members of the Management Board or Supervisory Board, any of the Underwriters or any of their respective representatives, is making any representation to any offeree or purchaser of the Offer Shares regarding the legality of an investment in the Offer Shares by such offeree or purchaser under the laws applicable to such offeree or purchaser.

All purchasers of Offer Shares are deemed to acknowledge that: (i) they have not relied on the Underwriters or any person affiliated with them in connection with any investigation of the accuracy of any information contained in this Prospectus or their investment decision; and (ii) they have relied only on the information contained in this Prospectus, and that no person has been authorised to give any information or to make any representation concerning the Company or its subsidiaries or the Offer Shares (other than as contained in this document) and, that if given or made, any such other information or representation has not been relied upon as having been authorised by the Company or the Underwriters.

EXCEPT AS OTHERWISE SET OUT IN THIS PROSPECTUS, THE OFFERING DESCRIBED IN THIS PROSPECTUS IS NOT BEING MADE TO INVESTORS IN THE UNITED STATES, CANADA, AUSTRALIA OR JAPAN, AND THIS PROSPECTUS SHOULD NOT BE FORWARDED OR TRANSMITTED IN OR INTO THE UNITED STATES, CANADA, AUSTRALIA OR JAPAN.

This Prospectus does not constitute or form part of any offer or invitation to sell, or any solicitation of any offer to acquire, Offer Shares in any jurisdiction in which such an offer or solicitation is unlawful or would result in the Company becoming subject to public company reporting obligations outside the Netherlands.

The distribution of this Prospectus, and the offer or sale of Offer Shares, is restricted by law in certain jurisdictions. This Prospectus may only be used where it is legal to offer, solicit offers to purchase or sell Offer Shares. Persons who obtain this Prospectus must inform themselves about and observe all such restrictions. None of the Company or the Underwriters accept any legal responsibility for any violation by any person, whether or not a prospective subscriber or purchaser of any of the Offer Shares, of any such restrictions.

No action has been or will be taken to permit a public offer or sale of Offer Shares, or the possession or distribution of this Prospectus or any other material in relation to the Offering, in any jurisdiction outside the Netherlands or Belgium where action may be required for such purpose. Accordingly, neither this Prospectus nor any advertisement or any other related material may be distributed or published in any jurisdiction except under circumstances that will result in compliance with any applicable laws and regulations. See Chapter 18 "Selling and Transfer Restrictions".

5.9 Forward-looking statements

This Prospectus contains various forward-looking statements that reflect the Company's current views with respect to the Group's future results of operations, financial condition, liquidity, performance, prospects, anticipated growth, strategies and opportunities and the markets in which the Group operates. Forward-looking statements as a general matter are all statements other than statements as to historical facts or present facts or circumstances. The words "may", "will", "would", "should", "expects", "intends", "estimates", "anticipates", "projects", "believes", "could", "hopes", "seeks", "plans", "aims", "objective", "potential", "goal" "strategy", "target", "continue", "annualised" and similar expressions or negatives thereof or other variations thereof or comparable terminology, identify certain of these forward-looking statements. Forward-looking statements appear in a number of places in this Prospectus, including, without limitation, in the Chapters in this Prospectus entitled "Summary", "Risk Factors", "Reasons for the Offering and Use of Proceeds", "Dividend Policy", "Business", "Operating and Financial Review".

Although the Company believes that the expectations reflected in these forward-looking statements are reasonable, the Group can provide no assurances that they will materialise or prove to be correct. Such forward-looking statements involve unknown risks, uncertainties and other factors, many of which are beyond the Company's control and which may cause the Company's actual results of operations, financial condition, business performance or achievements to be materially different from any future results of operations, financial condition and/or business performance or achievements expressed or implied by such forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in Chapter 4 "Risk Factors".

Investors or potential investors should not place undue reliance on the forward-looking statements in this Prospectus. The Group urges investors to read the Chapters of this Prospectus entitled "Risk Factors", "Business" and "Operating and Financial Review" for a more complete discussion of the factors that could affect the Group's future performance and the markets in which the Group operates. In light of the possible changes to the Group's beliefs, assumptions and expectations, the forward-looking events described in this Prospectus may not occur. Additional risks currently not known to the Group or that the Group has not considered material as of the date of this Prospectus could also cause the forward-looking events discussed in this Prospectus not to occur. Forward-looking statements involve inherent risks and uncertainties and speak only as of the date they are made. The Group undertakes no duty to and will not necessarily update any of the forward-looking statements in light of new information or future events, except to the extent required by applicable law.

5.10 Definitions

Except for the Dutch translation of the summary of this Prospectus included in Chapter 2 "Samenvatting", this Prospectus is published in English only. Definitions and terms used in this Prospectus are defined in Chapter 21 "Glossary of Selected Terms", section 21.1 "Certain general terms" and section 21.2 "Certain technical terms" with the exception of the Dutch definitions and terms used in Chapter 2 "Samenvatting" which are solely defined in that chapter.

5.11 Documents incorporated by reference

No documents or information, including the content of the Company's website (www.avantium.com) or of websites accessible from hyperlinks on the Company's website, form part of, or are incorporated by reference into, this Prospectus.

6 REASONS FOR THE OFFERING AND USE OF PROCEEDS

6.1 Reasons for the Offering and Admission

The principal purpose of the Offering is to raise capital to support the execution of the Company's strategy (see Chapter 11 "Business", section 11.3 "Strategy"), including the funding of the Joint Venture enabling it to construct and operate the Reference Plant for the commercialisation of the YXY Technology and to further develop the projects in the Renewable Chemistries business.

The Company believes that the Admission will further enhance the Company's profile, provide the Company with access to the capital markets and create liquidity for Shareholders.

6.2 Use of proceeds

The Company will receive only the proceeds of the Offering resulting from the issuance of the New Offer Shares. The Company will not receive any proceeds from the sale of the Management Shares by the Avantium Foundation on behalf of the Managers.

The gross proceeds of the Offering for the Company are estimated to amount to approximately €90 million, assuming the issuance of 8,133,168 New Offer Shares (excluding the Increase Shares and the Over-Allotment Shares). If the Increase Option and the Over-Allotment Option are exercised in full, the gross proceeds of the Offering for the Company are estimated to amount to approximately €103 million and €118 million respectively.

Costs of the Company associated with the Offering are expected to total up to approximately €8 million (including estimated expenses relating to the Offering and payment in full of all fees and commissions payable to the Underwriters, including the discretionary fee). The minimum net proceeds of the Offering for the Company must be at least €65 million. Avantium received irrevocable commitments to subscribe for Offer Shares for an amount of €20 million and firm intentions to subscribe for Offer Shares for an amount of €44 million (in total an aggregate amount of €56 million net). See Chapter 17 "Plan of Distribution", section 17.1 "Cornerstone Investors". If the net proceeds in the amount of €65 million are not raised, the Offering shall be cancelled.

The Company currently anticipates that it will use the net proceeds of the Offering as follows:

(1) approximately €65-75 million of the net proceeds will be used to fund the Joint Venture enabling it to construct and operate the Reference Plant for the commercialisation of the YXY Technology;
(2) approximately €15-20 million of the net proceeds will be used to build pilot plants for the two most advanced development projects in the Renewable Chemistries business, Project Zambezi and Project Mekong and to operate these plants up to commercial stage (approximately €7.5-10 million for each project); and
(3) the remainder will be used for other projects in Renewable Chemistries (including project Volta) and general corporate purposes in line with the Group's business and strategy, such as working capital and (re-)financing needs, general and administrative expenses, and additional costs associated with being a public company.

The funding of the Joint Venture referred to under (1) above will only arise following the FID, which decision is aimed to be taken in the fourth quarter of 2018.

If the net proceeds of the Offering amount to €65 million, the Company anticipates that it will use this entire amount for the funding of the Joint Venture.

It is estimated that the construction of the Reference Plant with an expected production capacity of 50 kta FDCA will cost approximately €275-325 million, including start-up costs and initial working capital needs. Circa 50% of the costs are expected to be financed through debt. The Joint Venture could deviate from this debt ratio, for example if another mix of capital would benefit the business case. A deviation is subject to unanimous shareholder approval.

The Group has initially contributed to the Joint Venture the IP in relation to the YXY Technology, the Pilot Plant, lab equipment relating to the YXY Technology and contracts (including employment contracts) relating to the YXY Technology. In return, the Group received an interest of 49% in the Joint Venture. BASF will initially contribute a cash amount of €57.2 million, in accordance with its interest of 51% in the Joint Venture. This amount will be used for the operating costs of the Joint Venture.

For illustrative purposes only, below is a calculation of the funding requirements by the Company in the expected scenario and in the worst case scenario.

Assuming (i) the costs will be €300 million and (ii) 50% of the costs are financed through debt, an additional amount of €150 million of equity financing is required following the FID. In accordance with its equity interest, approximately €73.5 million of this amount shall be funded by Avantium. Should the net proceeds of the Offering amount to €65 million, the remaining amount will be funded by Avantium using currently available funds (including the remaining funds from Convertible Loans).

In the event that the final estimated capital expenditures for the construction of the Reference Plant exceed the initially estimated capital expenditures (expected to be established in the fourth quarter of 2017) by more than 25% or exceed an amount of €400 million or in case the targeted amount of debt (50%) is not available, each of BASF and Avantium may exercise its exit right resulting in a neutral exit event (see Chapter 20 "General Information", section 20.3 "Material contracts", under "Exit rights, lock-up- and change of control provisions").

Assuming (i) the costs will be €400 million and (ii) 50% of the costs are financed through debt, an additional amount of €200 million of equity financing is required following the FID. In accordance with its equity interest, approximately €98 million of this amount should be funded by Avantium in the Joint Venture. Should the net proceeds of the Offering amount to €65 million, an additional €10 million can be funded by Avantium using other currently available funds and Avantium may, in agreement with BASF, accept the consequence of diluting its shareholding in the Joint Venture for the remaining €23 million. This would, following such dilution, result in an interest by Avantium of 42%.

If the Reference Plant will not be built in accordance with the terms of the Joint Venture Agreement, the Management Board will, following approval by the Supervisory Board and the General Meeting, resolve on an alternative use of the net proceeds referred to above under (1).

As of the date of this Prospectus, the Company cannot predict with certainty all of the particular uses for the proceeds from the issue of the New Offer Shares, or the amounts that it will actually spend on the uses set forth above. The amounts and timing of the Company's actual expenditures will depend upon numerous factors, including the progress, costs, timing and results of its R&D, regulatory or competitive developments, the net proceeds actually raised by it in the Offering, any amounts received by way of grants and the Group's operating costs and expenditures. The Management Board will have significant flexibility in applying the net proceeds from the issue of the New Offer Shares and may change the allocation of these proceeds as a result of these and other contingencies.

7 DIVIDEND POLICY

7.1 Dividend policy and history

The Company has not paid any dividends since its incorporation and it does not expect to pay dividends in the foreseeable future.

7.2 Profit ranking of the Shares

All of the Shares issued and outstanding on the day after the Settlement Date, including the Offer Shares, will rank equally and will be eligible for any profit or other payment that may be declared on the Shares.

7.3 Manner and time of dividend payments

It is intended that the payment of dividends in cash, if declared, will be made in euro. However, the Company may also declare dividends in kind by issuing new Shares or otherwise. Any dividends that are paid to Shareholders through Euroclear Nederland, will be automatically credited to the relevant Shareholders' accounts without the need for the Shareholders to present documentation proving their ownership of the Shares. In relation to dividend distributions, there are no restrictions under Dutch law in respect of holders of Offer Shares who are non-residents of the Netherlands. However, see Chapter 19 "Taxation" for a discussion of certain aspects of taxation of dividends for non-residents of the Netherlands.

The Company may only make distributions to the Shareholders if its shareholders equity exceeds the sum of the nominal value of the paid-in and called-up share capital plus the reserves as required to be maintained by Dutch law.

Profit is distributed after the adoption of the annual accounts from which it appears that distribution of such profit is admissible. The Management Board, subject to the approval of the Supervisory Board, may decide to make allocations to reserves and therefore decides how much of the profit will be allocated to reserves. The profits remaining shall be at the free disposal of the General Meeting. For more information see Chapter 14 "Description of Share Capital and Corporate Governance", section 14.4 "Share Capital" "Dividends and other distributions".

7.4 Uncollected dividends

A claim for any dividend declared lapses five years after the date on which those dividends were released for payment. Any dividend that is not collected by the Shareholders within this period reverts to the Company.

7.5 Taxation of dividends

Dividend payments are generally subject to withholding tax in the Netherlands. See Chapter 19 "Taxation" for a discussion of certain aspects of taxation of dividends and refund procedures.

8 CAPITALISATION AND INDEBTEDNESS

The information below should be read together with the Group's consolidated financial statements and the accompanying notes thereto, as well as Chapter 10 "Operating and Financial Review". The tables below are prepared for illustrative purposes only, and because of their nature, may not give a true picture of the Group's financial condition following the Offering.

The following tables set forth the Group's actual capitalisation and indebtedness as of 30 September 2016. In addition, the following tables reflect the adjustments with respect to the following transactions (i) receipt by the Company of the net proceeds of the New Offer Shares and (ii) the issuance of 2,704,883 Shares pursuant to a conversion of the Convertible Loans at 75% of the Offer Price immediately after Settlement.

Information in the first column is taken from the 9M Financial Information. The "Adjustments" and "As Adjusted" columns below are based on a number of estimates, and the corresponding final amounts will not be determinable until the aforementioned transactions have actually occurred. The second column reflects the adjustments relating the additional accrued interest on the Convertible Loans until the Settlement Date. The third column reflects the adjustments relating to the receipt by the Company of the net proceeds of the New Offer Shares, excluding any Increase Shares or Over-Allotment Shares, assuming the issuance of 8,133,168 New Offer Shares. The fourth column reflects the impact of the issuance of 2,704,883 Shares pursuant to a conversion of the Convertible Loans at 75% of the Offer Price immediately after Settlement, assuming an amount of accrued interest until the Settlement Date.

8.1 Capitalisation

(€ in thousands)	Actual	Adjustment	Adjustments	Adjustments	As Adjusted
	As at 30 September 2016 (unaudited)	Additional accrued interest on the Convertible Loans	Net proceeds of the New Offer Shares	Conversion of the Convertible Loans	Including the adjustments in columns 2, 3 and 4
Total current liabilities....	30,923	1,107	-	(22,315)	9,714
Guaranteed	-				-
Secured [(1)]........................	1,200				1,200
Not guaranteed/unsecured	29,723	1,107		(22,315)	8,514
Total non-current liabilities (excluding current portion of long-term debt)	3,758		-	-	3,758
Guaranteed	-				-
Secured [(1)]........................	3,758				3,758
Not guaranteed/unsecured	-				-
Shareholders' equity.......	(1,562)	(1,107)	81,465	22,315	101,111
Ordinary shares................	1,319		813	270	2,403
Share premium.................	81,272		80,652	22,045	183,968
Other reserves..................	6,070				6,070
Retained earnings………..	(90,223)	(1,107)			(91,330)
Total capitalisation..........	33,119		81,465	-	114,584

(1) The secured debt relates to a €4 million innovation loan from "Rijksdienst Voor Ondernemend Nederland" and the pledge on assets including the Pilot Plant as at 30 September 2016. Due to the contribution of the YXY Technology to the Joint Venture the pledge has been removed and the Group provided a €2 million guarantee to RVO instead. The guarantee is issued by ABN AMRO Bank N.V. on behalf of the Group.

Prior to Settlement, a capital restructuring will take place, consisting of the following steps: an amendment to the Company's articles of association providing for a reverse share split and consequently an increase of the nominal value of the Shares from €0.01 to €0.10 (the **Capital Restructuring**). The Capital Restructuring will not influence the Company's capitalisation.

8.2 Indebtedness

(€ in thousands)	Actual	Adjustments	Adjustments	Adjustments	As Adjusted
	As at 30 September 2016 (unaudited)	Additional accrued interest on the Convertible Loans	Net proceeds of the New Offer Shares	Conversion of the Convertible Loans	Including the adjustments in columns 2, 3 and 4
Cash	13,852		81,465		95,317
Cash equivalents	-				-
Trading securities	-				-
Liquidity	13,852		81,465	-	95,317
Current financial receivables	-		-	-	-
Current bank debt..........	-				-
Current portion of non-current debt	1,200				1,200
Convertible loans issued	21,209	1,107		(22,315)	-
Current financial debt .	22,409	1,107	-	(22,315)	1,200
Net Current Financial indebtedness	8,557	1,107	(81,465)	(22,315)	(94,116)
Non-current bank loans	-				-
Convertible loans issued	-				-
Other non-current loans.	3,758				3,758
Non-current Financial Indebtedness	3,758			-	3,758
Net Financial Indebtedness	12,315	1,107	(81,465)	(22,315)	(90,358)

Since 30 September 2016 there have been no significant changes to the Company's indebtedness, except for the changes discussed in section 8.3 "Significant changes to the capitalisation and indebtedness of the Group since 30 September 2016".

8.3 Significant changes to the capitalisation and indebtedness of the Group since 30 September 2016

In December 2016 the Group acquired for US$1.5 million (€1.4 million) in cash the main assets (i.e. patent portfolio, knowhow and hardware) from Liquid Light Inc. (New Jersey, USA, **Liquid Light**). Since 2011, Liquid Light raised over US$30 million to develop a process to convert CO_2 in chemicals based on electrochemistry.[4] The Group has moved all acquired assets to its R&D facilities in Amsterdam. The Group financed the acquisition from its own resources. As a consequence, cash decreased with an amount of US$1 million (€0.9 million) in December 2016 and the remainder is expected to be settled in the first half of 2017.

On 30 November 2016, Avantium established the Joint Venture (with economic effect as of 1 July 2016), to which Avantium contributed the YXY Technology, the Pilot Plant, and the related patents and knowhow. The contribution of the YXY Technology business to the Joint Venture results in a gain for the Group of €48.8 million, equal to the difference between the book value of the participation and the assets transferred to the Joint Venture, predominantly Pilot Plant related tangible fixed assets.

With the establishment of the Joint Venture on 30 November 2016, the line items in the tables in section 8.1 "Capitalisation" and 8.2 "Indebtedness" are impacted as follows:

- Retained earnings and therefore Shareholders' equity are €48.8 million higher (net of tax, however, the Company expects to have sufficient carry-forward fiscal losses) following the transfer of assets related to the YYX Technology, patents and knowhow to the Joint Venture;
- following the transfer of payroll related accruals to the Joint Venture and the corresponding payment from Avantium to the Joint Venture, the Cash balance and Total current liabilities decreased by €0.3 million;
- the Cash balance increased by €5.8 million following the receipt of a compensation from the Joint Venture in relation to expenses and capex for the period July 2016 - November 2016. This transaction has a negative impact on the value of the participation in the Joint Venture of €2.9 million, in accordance

[4] Www.datafox.com/liquid-light and www.crunchbase.com/organization/liquid-light#/entity.

with the Company's 49% interest and consequently an estimated overall positive impact on the Shareholders' equity of €2.9 million;

- the Cash balance increased by €0.7 million following the receipt of a compensation for overhead expenses allocated to the Joint Venture, resulting in an increase in Retained earnings and Shareholders' equity;
- on balance, Shareholders' equity increased with €52.4 million, Liquidity increased with €6.2 million and Total current liabilities decreased with €0.3 million.

9 SELECTED HISTORICAL FINANCIAL INFORMATION

The selected historical financial information of the Group shown in the tables below should be read in conjunction with the information contained in Chapter 5 "Important Information", section 5.4 "Presentation of financial and other information", Chapter 8 "Capitalisation and Indebtedness", Chapter 10 "Operating and Financial Review" and the Financial Information.

The tables below are derived from unaudited interim consolidated condensed financial statements of the Group as at and for the nine-month period ended 30 September 2016 (with comparative figures as at and for the nine-month period ended 30 September 2015) which should be read in conjunction with the accompanying notes thereto and the auditor's review report on the unaudited financial statements for the nine-month period ended 30 September 2016 (the 9M Financial Information) and selected audited consolidated financial statements of the Group as at and for the fiscal years ended 31 December 2015 (FY 2015) and 31 December 2014 (FY 2014), which should be read in conjunction with the accompanying notes thereto and the auditor's report thereon (the FY Financial Information). The 9M Financial Information has been prepared in accordance with IAS 34. The FY Financial Information has been prepared in accordance with IFRS.

The financial information for FY 2014 is (i) derived from the comparative information as included in the FY 2015 audited consolidated financial statements, which is different from the FY 2014 audited financial information due to the YXY Technology business which became a discontinued operation in 2015 and (ii), for comparative purposes, derived from the financial information for FY 2014 as included in the FY 2014 audited consolidated financial statements, which presents the YXY Technology business as continuing operations and the Pharma business as discontinued operations. The financial information for the fiscal years ended 31 December 2013 (FY 2013) is derived from the FY 2014 audited consolidated financial statements and presents the YXY Technology business as continued operations and Pharma business as discontinued operations. The financial information for the nine-month period ended 30 September 2016 presents the information for the YXY Technology business as discontinued operations. The comparative figures for the nine-month period ended 30 September 2015 presents the information for both the YXY Technology business and Pharma business as discontinued operations.

9.1 Selected consolidated income statement data

in Euro x 1,000	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	FY 2015 (*3)	FY 2014 (*4)	FY 2014 (*5)	FY 2013 (*6)
Continuing operations						
Revenues	6,148	7,008	10,266	9,628	10,306	13,070
Expenses (*7)						
Direct selling expenses	(1,088)	(858)	(1,767)	(2,276)		
Employee benefit expenses	(4,922)	(5,661)	(6,841)	(6,108)		
Depreciation, amortization and impairment charge	(577)	(447)	(621)	(569)		
Office and housing expenses	(1,458)	(1,232)	(1,846)	(1,356)		
Patent, license, legal and advisory expenses	(1,732)	(622)	(1,002)	(1,009)		
Laboratory expenses	(816)	(784)	(1,009)	(1,197)		
Marketing and representation expenses	(498)	(425)	(559)	(827)		
Other operating expenses	(320)	(35)	(94)	(411)		
Cost of sales					(9,687)	(8,958)
Selling and marketing costs					(2,156)	(2,030)
Research and development costs					(9,744)	(8,807)
General and administrative costs					(2,938)	(3,548)
Operating loss	**(5,263)**	**(3,056)**	**(3,473)**	**(4,126)**	**(14,221)**	**(10,273)**
Finance income	-	79	124	268	268	202
Finance costs	(1,433)	(209)	(1)	(598)	(845)	(981)
Finance costs - net	**(1,433)**	**(130)**	**123**	**(330)**	**(577)**	**(779)**
Loss before income tax	**(6,696)**	**(3,185)**	**(3,350)**	**(4,456)**	**(14,798)**	**(11,053)**
Income tax expense	-	-	-	-		
Loss for the year from continuing operations	**(6,696)**	**(3,185)**	**(3,350)**	**(4,456)**	**(14,798)**	**(11,053)**
Loss for the year from discontinued operations	**(5,352)**	**(7,022)**	**(9,828)**	**(9,899)**	**442**	**(73)**
Loss for the period	**(12,048)**	**(10,208)**	**(13,178)**	**(14,356)**	**(14,356)**	**(11,125)**
Total comprehensive income for the year	**(12,048)**	**(10,208)**	**(13,178)**	**(14,356)**	**(14,356)**	**(11,125)**
Loss attributable to:						
Owners of the parent	(12,048)	(10,208)	(13,178)	(14,798)	(14,798)	(11,053)
Non-controlling interests	-	-	-	442	442	(73)
	(12,048)	**(10,208)**	**(13,178)**	**(14,356)**	**(14,356)**	**(11,125)**
Total comprehensive income attributable to:						
Owners of the parent	(12,048)	(10,208)	(13,178)	(14,798)	(14,798)	(11,053)
Non-controlling interests	-	-	-	442	442	(73)
	(12,048)	**(10,208)**	**(13,178)**	**(14,356)**	**(14,356)**	**(11,125)**

(1) Figures in this column are unaudited and derived from the 9M 2016 interim consolidated condensed financial statements. The YXY Technology business is reported within discontinued operations.
(2) Figures in this column are unaudited and are derived from the comparative figures in the 9M 2016 interim consolidated condensed financial statements. The YXY Technology business and result of the sale of the Pharma business is reported within discontinued operations.
(3) Figures in this column are derived from the FY 2015 audited financial statements. The YXY Technology business and result of the sale of the Pharma business is reported within discontinued operations.
(4) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements. The YXY Technology business and Pharma business are reported within discontinued operations.
(5) Figures in this column are derived from the FY 2014 audited financial statements. The YXY Technology business is reported within continuing operations and Pharma business is reported within discontinued operations.
(6) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements. The YXY Technology business is reported within continuing operations and the Pharma business is reported within discontinued operations.
(7) The Group has changed the expense categories in the reported consolidated statements of comprehensive income in the 2015 financial statements to better reflect the actual expenses incurred and to ensure consistency between internal and external reporting.

9.2 Selected consolidated statement of financial position data

in Euro x 1,000	Q3 2016 (*1) Unaudited	FY 2015 (*2)	FY 2014 (*3)	FY 2013 (*4)
Assets				
Non-current assets				
Property, plant and equipment	3,767	4,017	9,180	9,606
Intangible assets	325	359	228	292
Total non-current assets	**4,092**	**4,376**	**9,408**	**9,898**
Current assets				
Inventories	985	1,045	896	1,309
Trade and other receivables	6,248	5,086	5,505	4,917
Cash and cash equivalents	13,852	6,981	19,140	5,425
Total current assets	**21,085**	**13,112**	**25,541**	**11,652**
Assets held for sale	7,943	5,424	419	-
Total assets	**33,120**	**22,913**	**35,369**	**21,550**
Liabilities				
Non-current liabilities				
Borrowings	3,758	3,600	3,865	5,651
Provisions for other liabilities and charges	-	-	266	256
Total non-current liabilities	**3,758**	**3,600**	**4,132**	**5,907**
Current liabilities				
Borrowings	22,409	400	2,033	10,674
Trade and other payables	8,338	6,196	7,472	7,997
Provisions for other liabilities and charges	175	168	264	193
Total current liabilities	**30,923**	**6,764**	**9,769**	**18,864**
Liabilities related to assets held for sale	-	3,190	(62)	-
Total liabilities	**34,681**	**13,555**	**13,838**	**24,771**
Equity				
Equity attributable to owners of the parent				
Ordinary shares	1,319	1,319	1,319	927
Share premium	81,272	81,272	81,272	43,491
Other reserves	6,070	5,266	5,207	4,272
Retained earnings	(90,223)	(78,499)	(66,784)	(51,986)
Total equity attributable to the owners of the parent	(1,562)	9,358	21,014	(3,296)
Non-controlling interest	-	-	517	75
Total equity	**(1,562)**	**9,358**	**21,531**	**(3,221)**
Total equity and liabilities	**33,120**	**22,913**	**35,369**	**21,550**

(1) Figures in this column are unaudited and derived from the 9M 2016 interim consolidated condensed financial statements. The assets and liabilities of the YXY Technology business are reported as held for sale.
(2) Figures in this column are derived from the FY 2015 audited financial statements. The assets and liabilities of the YXY Technology business are reported as held for sale. The Pharma business was effectively sold per 31 December 2014 and subsequently excluded from the Group's figures.
(3) Figures in this column are derived from the FY 2014 audited financial statements. The assets and liabilities of the Pharma business are reported as held for sale.
(4) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements and are similar to the comparative FY 2014 figures included in the FY 2014 audited financial statements.

9.3 Selected consolidated cash flow data

in Euro x 1,000	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	FY 2015 (*3)	FY 2014 (*4)	FY 2014 (*5)	FY 2013 (*6)
Cash flows from continuing operations						
Cash flows from operating activities						
Loss for the year from continuing operations	(6,696)	(3,185)	(3,350)	(4,456)	(14,798)	(11,053)
Adjustments for:						
- Depreciation	487	406	568	500	2,099	1,951
- Amortization	90	41	53	69	88	151
- Impairment	-	-	-	-	-	-
- Share-based payment	1,128	586	1,005	935	935	1,192
- Finance costs - net	1,433	130	(123)	330	577	778
Changes in working capital (excluding exchange differences on consolidation):						
- (Increase) / decrease in inventories	60	(283)	(255)	136	31	(305)
- (Increase) / decrease in trade and other receiv	(1,162)	2,711	(465)	(828)	(970)	(708)
- Increase / (decrease) in trade and other payal	2,142	(3,359)	590	(1,975)	(457)	128
- Increase / (decrease) in provisions	7	(372)	(362)	97	97	102
	(2,512)	(3,325)	(2,337)	(5,191)	(12,398)	(7,764)
Interest (paid)	(2)	(9)	(60)	(159)	(159)	(115)
Net cash used in operating activities	(2,514)	(3,334)	(2,397)	(5,350)	(12,557)	(7,879)
Cash flows from investing activities						
Purchases of property, plant and equipment (PPE)	(244)	(1,625)	(2,126)	(1,635)	(1,635)	(1,960)
Purchases of intangible assets	(56)	(31)	(191)	(185)	(185)	(26)
Net cash used in investing activities	(300)	(1,656)	(2,317)	(1,820)	(1,820)	(1,986)
Cash flow from financing activities						
Proceeds from issuance of ordinary shares	-	-	-	27,035	27,035	-
Interest received	-	44	124	268	268	203
Innovation loan	-	-	224	-	-	1,222
Convertible bond	20,000	-	-	-	-	10,000
Repayments of borrowings	-	-	(5)	(5)	(5)	(5)
Net cash generated from financing activities	20,000	44	343	27,298	27,298	11,421
Cash flows from discontinued operations						
Net cash from/ (used in) operating activities	(7,578)	(2,403)	(3,847)	(6,461)	745	(37)
Net cash from/ (used in) investing activities	(2,738)	-	-	-	-	-
Net cash from/ (used in) financing activities	-	(4,000)	(4,000)	21	21	-
Change in cash from discontinued operations	**(10,316)**	**(6,403)**	**(7,847)**	**(6,440)**	**767**	**(37)**
Net increase / (decrease) in cash, cash equivalents	**17,186**	**(4,946)**	**(4,371)**	**20,128**	**12,921**	**1,556**
Cash and cash equivalents at beginning of the year	6,981	19,140	19,140	5,425	5,425	3,904
Effect of exchange rate changes	(0)	35	59	26	26	2
Cash and cash equivalents from continuing operations at end of financial year	**24,168**	**14,230**	**14,828**	**25,580**	**18,373**	**5,462**
Cash and cash equivalents at end of financial year	**13,852**	**7,827**	**6,981**	**19,140**	**19,140**	**5,425**

(1) Figures in this column are unaudited and derived from the 9M 2016 interim consolidated condensed financial statements. The YXY Technology business is reported within discontinued operations.
(2) Figures in this column are unaudited and are derived from the comparative figures in the 9M 2016 interim consolidated condensed financial statements. The YXY Technology business and result of the sale of the Pharma business is reported within discontinued operations.
(3) Figures in this column are derived from the FY 2015 audited financial statements. The YXY Technology business and result of the sale of the Pharma business is reported within discontinued operations.
(4) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements. The YXY Technology business and Pharma business are reported within discontinued operations.
(5) Figures in this column are derived from the FY 2014 audited financial statements. The YXY Technology business is reported within continuing operations and Pharma business is reported within discontinued operations.
(6) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements. The YXY Technology business is reported within continuing operations and the Pharma business is reported within discontinued operations.

10 OPERATING AND FINANCIAL REVIEW

The following commentary should be read together with the "Selected Historical Financial Information" included in Chapter 9, the Group's unaudited interim consolidated condensed financial statements as at and for the nine-month period ended 30 September 2016 (with comparative figures as at and for the nine-month period ended 30 September 2015) and the Group's audited consolidated financial statements as at and for the fiscal years ended 31 December 2015, 31 December 2014 and 31 December 2013, as well as the accompanying notes thereto, included in Chapter 22 "Index to the Financial Statements". The Financial Information has been prepared in accordance with IFRS as adopted by the European Union.

This section may contain "forward-looking statements". Such statements are subject to risks, uncertainties and other factors, including those set forth in Chapter 4 "Risk Factors" that could cause the Group's future results of operations, financial position or cash flows to differ materially from the results of operations, financial position or cash flows expressed or implied in such forward looking statements. See Chapter 5 "Important Information", section 5.9 "Forward-looking statements" for a discussion of risks associated with reliance on forward-looking statements.

10.1 Overview

Avantium is a leading chemical technology company in developing and commercialising innovative renewable chemistry solutions as sustainable alternatives to fossil-based chemicals and materials.

Avantium aims to develop ground-breaking proprietary chemical technologies and production processes to convert biobased feedstock into high-performing, cost competitive and sustainable products, together with its partners around the world. Avantium also provides advanced catalysis R&D services and systems to renowned chemical, refinery and energy companies.

The Group's business comprises (i) the YXY Technology (operated through the Joint Venture with BASF), (ii) Renewable Chemistries and (iii) Catalysis, which are briefly described below.

YXY Technology

Avantium has developed the proprietary YXY Technology to catalytically convert plant-based sugar into a wide range of biobased chemicals and plastics like PEF.

On 30 November 2016, Avantium established a joint venture with BASF (with economic effect as of 1 July 2016), in which it has a non-controlling interest of 49%, to commercialise the YXY Technology (the Joint Venture), to which Avantium contributed the YXY Technology, the FDCA pilot plant in Geleen that has been operational since 2011 (the Pilot Plant), and the related patents and knowhow. The Joint Venture intends to build and operate the first commercial scale plant for the production of FDCA (the Reference Plant). Construction of the Reference Plant is expected to start by the end of 2018, with sales of FDCA and PEF expected to commence in 2021. The Joint Venture intends to subsequently license the YXY Technology to BASF and others to enable global industrial scale production of FDCA and PEF as from 2021.

Renewable Chemistries

Renewable Chemistries is Avantium's development division with a portfolio of new projects focusing on the conversion of biomass to chemical building blocks and plastic materials. It operates on the basis of the Group's extensive experience and expertise in catalysis R&D, processing and conversion of biomass feedstock, chemical process design and pilot scale operations.

The YXY Technology is the furthest advanced technology developed by the Renewable Chemistries business. Two other projects have reached or are entering pilot plant stage: project Mekong and project Zambezi. Project Volta and four other projects are currently in lab stage and two projects are in concept stage.

Catalysis

For over 15 years, Catalysis has been providing advanced catalysis R&D services and systems to companies in the chemical, refinery and energy sector. The Group has developed a strong, international customer base including several industry leaders. From its R&D facilities in Amsterdam, Avantium helps its customers to innovate faster with a higher probability of success and to shorten the time-to-market of new catalysts. Avantium gained considerable experience and expertise from its Catalysis business and has (co-)invented numerous new catalysts and new and improved chemical processes for its customers.

See Chapter 11 "Business" for more information on the Group's business.

Source of funds

The Group's primary sources of liquidity have been the operating cash flow generated from the Catalysis division and, until its disposal per 31 December 2014, of Avantium Pharmatech B.V., equity financing and government subsidies.

Avantium's equity financing can be highlighted as follows:

- In October 2008, Avantium completed an equity financing round of €18 million. It welcomed Aescap, Capricorn, ING and Navitas as new equity investors. Avantium received €10 million of the equity financing. The remaining amount of €8 million was paid by the new investors to buy out certain shareholders.
- In June 2011, Avantium completed an equity financing round of €25 million: €14 million from new equity investors Sofinnova Partners, Aster Capital and Timber Invest and €11 million from existing shareholders which included the conversion of a €2 million convertible loan received in 2010. Overall, Avantium received €17 million of this equity financing. The remaining amount of €8 million was paid by the new investors to buy out certain shareholders.
- In June 2014, Avantium completed a new round of equity financing from its existing shareholders and four new strategic investors, Swire, The Coca-Cola Company, Danone and ALPLA. The financing round totalled €37 million (€26 million pursuant to the issuance of Shares (of which €21 million came from new strategic investors)), €10 million pursuant to the conversion of a subordinated loan provided to the Group in 2013 and €1 million of accrued interest). In December 2014, the Group raised an additional €1.3 million of new equity funding under the June 2014 terms and conditions.
- In March 2016, Avantium secured a €20 million convertible loan from PMV, FPIM and several of Avantium's existing Shareholders (the CLA). Pursuant to the CLA, each CLA Lender has the right, but not the obligation, to convert its loan into Shares upon Settlement at a discount of 25% to the Offer Price. Certain CLA Lenders have irrevocably committed to convert their entire loan into Shares at Settlement for an aggregate amount of €20 million.

In 2011, Avantium secured €5 million through a subsidy of €1 million and an innovation credit of €4 million from the Dutch Ministry of Economic Affairs, Agriculture and Innovation. During the period 2013-2015, the Group recognised for its three businesses €2.2 million of government grants relating to research and development wage tax deductions (**WBSO**) and an additional €3.8 million for other specific development projects.

10.2 Recent developments

On 30 November 2016, Avantium established the Joint Venture (with economic effect as of 1 July 2016), to which Avantium contributed the YXY Technology, the Pilot Plant, and the related patents and knowhow. See *inter alia* section 10.3 "Key factors affecting the Group's result of operations and financial condition" under "Impact of results of the Joint Venture" below.

In December 2016 the Group acquired for US$1.5 million (€1.4 million) in cash the main assets (i.e. patent portfolio, knowhow and hardware) from Liquid Light. Since 2011, Liquid Light raised over US$30 million to develop a process to convert CO_2 in chemicals based on electrochemistry. The Group has moved all acquired assets to its R&D facilities in Amsterdam. The Group financed the acquisition from its own resources. See Chapter 8 "Capitalisation and Indebtedness".

In December 2016, the Group signed a non-binding memorandum of understanding with AKZO Nobel Industrial Chemicals B.V. (**AKZO Nobel**), RWE Generation NL B.V. (**RWE**) and Staatsbosbeheer to explore a flagship wood-to-chemicals biorefinery at the chemical cluster in Delfzijl, the Netherlands. The partnership expects that the Project Zambezi technology, together with the geographical, technical and logistical benefits of the Delfzijl area, will enable the cost-competitive production of cellulosic sugars that will help accelerate the roll out of the biobased economy. See Chapter 11 "Business", section 11.4.2 "Renewable Chemistries".

Overall trading of the Group in the fourth quarter of 2016 and in 2017 to date has been in line with the Group's expectations. The generation of revenues and adjusted EBITDA from the Catalysis business in FY 2016 are expected to be in line with FY 2015.

10.3 Key factors affecting the Group's results of operations and financial condition

Avantium believes that the factors discussed below had, have or are expected to continue to have a material effect on the Group's operational results and financial condition. With economic effect from 1 July 2016, the Group will no longer bear the costs for the YXY Technology, nor recognise the subsidy or revenue relating thereto. In the Group's FY 2015 financial statements, the YXY Technology is disclosed as part of the discontinued operations. In Chapter 9 "Selected Historical Financial Information" and Chapter 10 "Operating and Financial Review", the financial information of the year ended 31 December 2014 has been derived from the comparative information as included in the audited financial statements of 2015 and therefore the YXY Technology business is disclosed as part of the discontinued operations. Avantium reported a loss of €9.9 million in 2014, €9.8 million in 2015 and €5.4 million for the nine-month period ended 30 September 2016, relating to these discontinued operations. As the YXY Technology business is disclosed as discontinued operations, section 10.4 "Results of operations for 9M 2016, 9M 2015, FY 2015, FY 2014 and FY 2013" only discusses the Renewable Chemistries and Catalysis businesses.

Revenues

YXY Technology

The Group aims to commercially deploy the YXY Technology, through the Joint Venture, by producing FDCA at the Reference Plant that it intends to build, and selling FDCA and PEF to third parties, and by subsequently selling Licences to third parties. The ability for the Joint Venture to generate revenues based on the YXY Technology therefore mainly depends on its ability to enter into sale or licence agreements with third parties. For more information on licence strategy, see Chapter 11 "Business", section 11.4.1 "YXY Technology", under "Licence strategy". The first few licences will benefit from a discount on the licence fee to compensate for the risks involved in scaling up production from 50 kta to industrial scale.

The Joint Venture will pay 20% of the Licence income to the Group until 2035 (**Earn-out**). Payments of Earn-outs might be deferred for a maximum of five years if such distribution (i) is not available from distributable annual profits and/or retained earnings or otherwise prohibited under Dutch law, (ii) would result in a negative balance of BASF's or Avantium's capital accounts or negative equity of the Joint Venture, or (iii) is in conflict with obligations under any financing agreement or liquidity planning of the Joint Venture. In general, earn-out payments have priority over dividend payments (see Chapter 20 "General Information", section 20.3 "Material contracts" under "Joint Venture agreement with BASF" sub "Proceeds from the Joint Venture"). In case Avantium dilutes its equity share in the Joint Venture to below 40%, the Group's entitlement to the Earn-out will be reduced according to a pre-determined schedule.

The Group will recognise receipt of the Earn-out as revenue and account for this revenue on the basis of IFRS and as per the characteristics of the Licence. Characteristics include for example the type of fee: upfront, per milestone or an annual percentage of the revenue of the licensee. The Group also foresees to recognise dividend payments from the Joint Venture. See Chapter 20 "General information", section 20.3 "Material contracts" for information on the expected dividend policy of the Joint Venture.

During the period 2013-2015, the YXY business recognised €2.9 million of revenues related to the YXY Technology, including joint development contributions from The Coca-Cola Company, Danone and ALPLA and compensation for FDCA and PEF material provided to other partners. In Chapter 9 "Selected Historical Financial Information" this revenue is included in the discontinued operations for FY 2014 and FY 2015.

Renewable Chemistries

The development programs for renewable chemicals did not generate revenues in 2013-2015.

The Zambezi Project has moved into pilot plant stage. The Group plans to start constructing the pilot plant directly following completion of the Offering, if sufficient funds are raised, and expects the pilot plant to be operational in the second quarter of 2018. The pilot plant may generate revenues from providing material or entering into partnerships onwards. Provided that the pilot plant stage is successful, the Group intends to design and construct a first commercial plant in 2019-2020. The business model will be established based on the most attractive value creating option.

Project Mekong is expected to move into pilot plant stage in Q2 2017. Avantium anticipates that the Group will make the investment decision for the pilot plant by the beginning of 2018, after which construction will take about one year. If testing on pilot plant scale is successful, the Group expects to make a final decision regarding a possible commercial scale plant by the beginning of 2021. Avantium plans to enter into one or more partnerships before the construction and operations of the commercial scale plant.

Catalysis

For FY 2013, FY 2014, FY 2015 and 9M 2016, most of the Group´s revenues from continuing operations are attributable to its Catalysis business. Over the period 2013-2015, Avantium generated €31 million of cumulative revenues in this business unit, of which approximately 50% was generated by providing contract research services and approximately 50% by providing equipment. The Group expects FY 2016 revenues to be in line with FY 2015 revenues.

The Group serves an international blue-chip customer base in the chemical, refinery and energy industry. In the period 2013-2015, over 70% of the revenues of the Catalysis business was derived from recurring customers. Circa 80% of the Group's order intake in that period was generated on average from 36% of its total number of customers.

Revenues of the Catalysis business are dependent on the amount of R&D budgets allocated to the R&D departments of companies in the chemical, refinery and energy sector, the outsourcing of catalysis services to external parties, such as Avantium, and customer loyalty. See Chapter 4 "Risk Factors", under "*The Group's Catalysis business is dependent on R&D spending and outsourcing by companies in the chemical, refinery and energy sector.*"

Expenses

The Group identifies the following expense categories:

- Direct selling expenses;
- Operating expenses:
  - employee benefit expenses;
  - depreciation, amortisation and impairment charge;
  - office and housing expenses;
  - patent, license, legal and advisory expenses;
  - laboratory expenses;
  - marketing and representation expenses; and
  - other operating expenses.

In 2015, 50% of all expenses (in relation to continuing operations, which excludes the YXY Technology) related to Catalysis (2014: 54%), 5% to Renewable Chemistries (2014: -2% as recognised subsides exceeded costs) and 45% to overhead (2014: 48%).

Direct selling expenses

For FY 2014 and FY 2015, the direct selling expenses comprise cost of goods sold related to the external assembly of the Flowrence™ systems within the Catalysis business. During the period 2013-2015, the total cost of goods sold for Flowrence equipment was 41% of the total Catalysis systems revenues. The direct selling expenses for the 2013 financial information also include costs for the currently discontinued operations of the Pharma business (€0.5 million) and YXY Technology (€1.6 million). During the period 2013-2015 the total amount of direct selling expenses was 15% of the total expenses.

Operating expenses

During 2013-2015, 56% of the total presented operating expenses consisted of employee benefit expenses, after deduction of €5.3 million of recognised subsidies. The Company receives subsidies which support its efforts in defined research and development projects. These subsidies typically provide for reimbursement of approved costs incurred or a wage tax reduction. Subsidies are presented as a reduction of employee benefit expenses, considering the fact that R&D costs primarily consist of wages. Subsidies are recognised at their fair value when there is a reasonable assurance that the subsidy will be received and the Group is able to comply with all relevant conditions. During 2013-2015, the employee benefit expenses included €3.1 million of non-cash share based compensation charges considered part of overhead. Until FID, the Group expects to charge between €1.5 million and €2.0 million per year to the Joint Venture as a compensation for providing office and lab spaces and facility, legal, financial, accounting and human resource services, which decreases overhead for the Group. After a positive FID this charge will gradually decrease with respect to the services and may decrease further when the Group would provide less or no office and lab spaces to the Joint Venture, in which case the Group will accordingly scale down the overhead.

Foreign currency risk

The Group operates internationally and has a policy to negotiate commercial transactions in euros. However, in certain circumstances, subject to Management Board approval, the Group may enter into contracts denominated in other currencies. As a result, the Group is exposed to foreign exchange rate risk, primarily with respect to the US dollar. At 31 December 2015, the Group had outstanding trade receivables of US$266k (2014: US$343k) and outstanding trade payables of US$14k (2014: US$219k, of which US$17k related to the YXY Technology). The Group had no trade receivables or trade payables in other foreign currencies.

At 31 December 2015, if the currency had weakened by 10% against the US dollar with all other variables held constant, post-tax result for the year would have been €13k higher (2014: €53k higher) as the cash position included US$135k. The Group had no cash position in other foreign currencies.

Credit risk

Credit risk is managed on Group basis. The Group's credit risk is limited to outstanding trade receivables and cash and cash equivalents. On 31 December 2015, the largest single client exposure consisted of 31% of the outstanding trade receivables. The Group's clients are subject to creditworthiness tests. Sales are subject to payment conditions varying between payments in advance and 30 days after invoice date. For certain projects, deviations to this rule may apply only after approval, in which case additional security, including guarantees and documentary credits, may be required. Avantium does not expect any losses from defaults by its clients. In 2015 nil Euro (2014: nil Euro) was written off for trade receivables.

Impact of results of the Joint Venture

The Group has initially contributed to the Joint Venture the intellectual property (**IP**) in relation to the YXY Technology, the Pilot Plant, lab equipment relating to the YXY Technology and contracts (including employment contracts) relating to the YXY Technology. In addition, the Group has transferred a subsidy application to the

Joint Venture. In return, the Group received an interest of 49% in the Joint Venture and the right to Earn-out payments.

For the Group, the total book value of this participation as per 30 November 2016 is €55.0 million and BASF's 51% interest in the Joint Venture reflects their cash contribution of €57.2 million. The contribution of the YXY Technology business to the Joint Venture results in a gain for the Group of €48.8 million, equal to the difference between the book value of the participation and the assets transferred to the Joint Venture, predominantly Pilot Plant related tangible fixed assets. The Group did not capitalise the IP related to the YXY Technology on its balance sheet and consequently there is no impact on the intangible fixed assets.

Besides the above mentioned gain, the direct effect on the Group's result is that revenue and expenses related to the YXY Technology business move to the Joint Venture effective as of 1 July 2016. As a result, per 30 November 2016 the Group has a receivable of €3.8 million from the Joint Venture in relation to expenses and capex for the period July 2016 - September 2016. Per 30 November 2016, for the period July 2016 - November 2016, the receivable is estimated to be €5.8 million (which includes the aforementioned receivable of €3.8 million). Following 30 November 2016 all YXY Technology business related expenses will be directly born and settled by the Joint Venture. In addition, the Group expects to charge until FID between €1.5 million and €2.0 million per year to the Joint Venture as a compensation for providing office and lab spaces and facility, legal, financial, accounting and human resource services, which decreases overhead for the Group. Avantium will recognise 49% of the result of the Joint Venture in its income statement and the 49% equity share in the Joint Venture will in the consolidated statement of financial position be presented as a participation, recognised using the equity method. Avantium will not consolidate the Joint Venture as it cannot exercise control over the Joint Venture. After a positive FID, BASF SE will fully consolidate the Joint Venture in accordance with IFRS 10. See Chapter 20 "General information", section 20.3 "Material contracts" for information on the expected dividend policy of the Joint Venture.

For illustration purposes[5], had the transaction been undertaken at the commencement of the nine-month period ended 30 September 2016 this would have caused the following unaudited pro forma changes to the income statement and consolidated statement of financial position data on 1 January 2016:

- a gain of €48.8 million (net of tax, however, the Company expects to have sufficient carry-forward fiscal losses) would have been realised after receiving a participation in the Joint Venture with a value of €55.0 million minus €6.2 million book value of assets transferred to the Joint Venture. The 49% participation in the Joint Venture is valued at €55.0 million reflecting the BASF contribution of €57.2 million to the Joint Venture in accordance with its interest of 51% at 30 November 2016 (the date of incorporation of the Joint Venture);
- at 30 November 2016 (the date of incorporation of the Joint Venture), there would not be a receivable which has been estimated at €5.8 million from the Joint Venture in relation to expenses and capex for the period July 2016 – November 2016. The estimated amount of €5.8 million is based on actual costs made by the YXY Technology and the final amount will be established following discussions with the Joint Venture and finalisation of the audited consolidated financial statements of the Group as at and for the fiscal year ended 31 December 2016;
- an estimated cash compensation would have been received from the Joint Venture for allocated overhead expenses of €1.2 million; and
- the €5.4 million loss for the period from discontinued operations would not be recorded in the Group's condensed consolidated financial statement of comprehensive income. Instead, there would be an assumed loss from the Joint Venture participation of an estimated €3.2 million, representing 49% of the operating loss of €6.6 million (€5.4 million as loss for the period from discontinued operations plus the above mentioned €1.2 million as overhead expenses charged by the Group) and a subsequent decrease of the value of the participation in the Joint Venture with the assumed loss of €3.2 million.

Going forward, the valuation of the participation in the Joint Venture, in particular the IP relating to the YXY Technology, are to a significant degree dependent on the Joint Venture's estimates of future cash generation and the weighted average cost of capital. The Group now estimates a ten year depreciation of the Reference Plant in accordance with IFRS, tangible and intangible assets are tested for impairment annually or upon the occurrence of a triggering event. An impairment loss will be recognised in the Joint Venture's income statement when the carrying amount of the asset is greater than recoverable amount. Any impairment made by the Joint Venture may have an impact on the Group's results of operations. The performance of the Joint Venture is also impacted by similar international, regional and local conditions, such as macroeconomics and government regulations, as the Group.

Taxation

Avantium forms a single fiscal entity with its Dutch subsidiaries held both directly and indirectly for Dutch corporation tax purposes. This means that the entities are considered as one tax paying entity and that taxable

[5] This unaudited pro forma data has been prepared for illustrative purposes only and, because of its nature, addresses a hypothetical situation and does not represent the actual financial position of the Group. It builds on the assumption that the Joint Venture would have been in place from 1 January 2016. Neither the assumptions nor the resulting pro forma financial information have been audited or reviewed in accordance with any generally accepted auditing standards.

profits are calculated on a consolidated basis. The members of the fiscal entity are jointly and severally liable for any taxes payable by the fiscal entity.

The total amount of tax losses carried forward as of 31 December 2015 is estimated at €86.9 million. Tax loss carry-forward is subject to a time limitation of nine years. The tax loss carry-forward may be used by the Group in connection with the taxable gain of €48.8 million, which has been realised from its contribution of the YXY Technology business to the Joint Venture. The gain is a result of the difference between the estimated book value of the participation of €55.0 million and the estimated book value of all assets and liabilities held for sale. As at 30 September 2016, no deferred tax asset for the tax losses carried forward has been recorded by the Company.

10.4 Results of operations for 9M 2016, 9M 2015, FY 2015, FY 2014 and FY 2013

This paragraph explains the differences of the principal components of the Group's revenues and costs including a break down in the business units Renewable Chemistries and Catalysis for the continuing operations during 9M 2016, 9M 2015, FY 2015, FY 2014 and FY 2013 and therefore excludes the YXY Technology business and the Pharma business, which are discussed in section 10.5 "Results of operations YXY Technology business reported as discontinued operations" and section 10.6 "Results of operations of the Pharma business reported as discontinued operations". The revenue split for 9M 2016, 9M 2015, FY 2015 and FY 2014 for the Catalysis and Renewable Chemistries business unit have been derived from the notes on segment information in the FY Financial Information and the 9M Financial Information.

Movements in the consolidated statement of financial position during the relevant period are primarily linked to the operating losses (as discussed hereafter), capital contributions and borrowings (see section 10.8 "Liquidity and capital resources") and the classification of YXY Technology business as assets or liabilities held for sale in FY 2015.

Consolidated income statement for 9M 2016 compared to 9M 2015

Revenues

(€ in thousands)	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	Change	
Revenues	**6,148**	**7,008**	**(861)**	**-12.3%**
Catalysis	6,148	7,008	(861)	-12.3%
Renewable Chemistries	-	-	-	-

(1) Figures in this column are unaudited and derived from the 9M 2016 interim consolidated condensed financial statements.
(2) Figures in this column are unaudited and are derived from the comparative figures in the 9M 2016 interim consolidated condensed financial statements.

For the nine-month period ended 30 September 2016, revenues decreased from €7.0 million to €6.1 million, compared to the same period in prior year. This is mainly the result of a decrease in Catalysis services revenues (of approximately €1.5 million) partially offset by an increase in Catalysis systems revenues of €0.6 million. The decrease in Catalysis services revenue can be explained by the pressure on external R&D spending by integrated oil majors and related technology providers due to the low oil price. Catalysis systems revenues predominantly increased via higher customer service revenues. The Group more proactively markets and delivers system technology upgrades.

Direct selling expense and operating costs

(€ in thousands)	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	Change	
Direct selling expenses	1,088	858	230	26.9%
Employee benefit expenses	4,922	5,661	(739)	-13.1%
Depreciation, amortization and impairment charge	577	447	129	28.9%
Office and housing expenses	1,458	1,232	225	18.3%
Patent, license, legal and advisory expenses	1,732	622	1,110	178.3%
Laboratory expenses	816	784	32	4.1%
Marketing and representation expenses	498	425	74	17.3%
Other operating expenses	320	35	285	826.0%
Total direct selling and operating costs	**11,411**	**10,064**	**1,347**	**13.4%**

(1) Figures in this column are unaudited and are derived from the 9M 2016 interim consolidated condensed financial statements.
(2) Figures in this column are unaudited and are derived from the comparative figures in the 9M 2016 interim consolidated condensed financial statements.

The most significant fluctuations within the expense categories are in employee benefit expenses, patent, license, legal and advisory expenses and in other operating expenses.

Employee benefit expenses decreased from €5.7 million in the nine-month period ended 30 September 2015 to €4.9 million in the nine-month period ended 30 September 2016. This decrease is mainly the result of an increase in subsidy recognition as several new EU Horizon 2020 subsidies have been received, resulting in €0.8 million additional subsidy recognition and lower employee benefit expense. Furthermore, there has been a change in subsidy criteria by the Dutch government with respect to government grants relating to WBSO, which have resulted in €1.0 million more R&D subsidy recognition. The increase in subsidy recognition is partially offset by an increase in FTE for continuing operations (89.4 in the nine-month period ended 30 September 2016 vs. 84.6 in the nine-month period ended 30 September 2015 (average FTE for the three quarters ended) and an overall salary increase of on average 3%, resulting in €0.5 million more gross wage expenses. Expenses in relation to the share-based payment plan have increased with €0.4 million, following a significant number of granted options at the end of 2015.

The increase in patent, license, legal and advisory expenses of €0.6 million in the nine-month period ended 30 September 2015 to €1.7 million for the nine-month period ended 30 September 2016, is mainly the result of advisory and legal fees in relation to the negotiations with BASF on the Joint Venture, the filing of a number of polymerisation patents in several countries and additional expenses made in the process of becoming a listed entity.

Other operating expenses increased from €0.0 million in the nine-month period ended 30 September 2015 to €0.3 million in the nine-month period ended 30 September 2016. The main cause for this increase is related to development expenses in preparation of the Project Zambezi pilot plant basic engineering and development trials. This is a new activity undertaken in 2016.

Consolidated income statement for FY 2015 compared to FY 2014

Revenues

(€ in thousands)	**FY 2015 (*1)**	**FY 2014 (*2)**	**Change**	
Revenues	**10,266**	**9,610**	**656**	**6.8%**
Catalysis	10,266	9,605	661	6.9%
Renewable Chemistries	-	5	(5)	-100.0%

(1) Figures in this column are derived from the FY 2015 audited financial statements.
(2) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements.

From 2014 to 2015, overall revenues increased from €9.6 million to €10.3 million, which is the result of the Catalysis business. This revenue improvement was a direct result of an increase of €1.3 million in Catalysis services revenues, where some major contracts were entered into, partially offset by lower Catalysis systems revenues of €0.6 million caused by a Flowrence™ unit less sold, being a high-value, low volume business.

Direct selling expense and operating costs

(€ in thousands)	**FY 2015 (*1)**	**FY 2014 (*2)**	**Change**	
Direct selling expenses	1,767	2,276	(509)	-22.4%
Employee benefit expenses	6,841	6,108	733	12.0%
Depreciation, amortization and impairment charge	621	569	52	9.1%
Office and housing expenses	1,846	1,356	490	36.2%
Patent, license, legal and advisory expenses	1,002	1,009	(7)	-0.7%
Laboratory expenses	1,009	1,197	(188)	-15.7%
Marketing and representation expenses	559	827	(268)	-32.4%
Other operating expenses	94	411	(317)	-77.1%
Total direct selling and operating costs	**13,739**	**13,754**	**(15)**	**-0.1%**

(1) Figures in this column are derived from the FY 2015 audited financial statements.
(2) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements.

The most significant fluctuations within the expense categories are in direct selling expenses, employee benefit expenses and office and housing expenses.

The direct selling expenses, which comprise of cost of goods sold for outsourced assembly of Catalysis systems, decreased from €2.3 million in 2014 to €1.8 million in 2015. The fluctuation in direct selling expense is mainly a result of the decrease in Catalysis systems revenues in 2015 compared to 2014.

Employee benefit expenses increased from €6.1 million in 2014 to €6.8 million in 2015. This increase is mainly the result of an increase in average FTE's for continuing operations (80.1 in 2015 compared to 78.2 in 2014) and less subsidies recognised for continuing operations causing an increase in employee expenses of €0.3 million.

Depreciation, amortisation and impairment charges mainly relate to Catalysis investments in lab equipment and technology and software; see also section 10.8 “Liquidity and capital resources”, under “Cash flow from investing activities”.

Office and housing expenses increased from €1.4 million in 2014 to €1.8 million in 2015. The increase in office and housing expenses in 2015 can be explained for €0.3 million by the initiation and completion of the renovation project of the office in Amsterdam. The other €0.2 million increase is the result of the absence of a rent contribution from the Pharma business that was sold per 31 December 2014.

The other operating expenses decreased from €0.4 million in 2014 to €0.1 million in 2015, as a result of the release of a decommission provision recorded in prior years. The Group signed in 2015 a new lease agreement which does not include the obligation to bring the lab and offices back in original state. As a result the Group released the decommission provision.

Consolidated income statement for FY 2014 compared to FY 2013

Revenues

(€ in thousands)	FY 2014 (*1)	FY 2013 (*2)	Change	
Revenues	**9,610**	**11,157**	**(1,547)**	**-13.9%**
Catalysis	9,605	11,157	(1,552)	-13.9%
Renewable Chemistries	5	-	5	100%

(1) Figures in this column are derived from the FY 2014 audited financial statements.
(2) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements.

Revenues decreased from €11.2 million in 2013 to €9.6 million in 2014. This decrease was primarily caused by Catalysis systems revenues which decreased by €1.3 million as a result of fewer Flowrence™ units sold, being a high-value, low volume business.

Direct selling expense and operating costs

(€ in thousands)	FY 2014 (*1)	FY 2013 (*2)	Change	
Direct selling expenses	2,276	2,254	22	1.0%
Employee benefit expenses	6,108	6,964	(856)	-12.3%
Depreciation, amortization and impairment charge	569	725	(155)	-21.4%
Office and housing expenses	1,356	1,488	(132)	-8.9%
Patent, license, legal and advisory expenses	1,009	1,134	(124)	-11.0%
Laboratory expenses	1,197	852	345	40.5%
Marketing and representation expenses	827	655	172	26.3%
Other operating expenses	411	325	86	26.5%
Total direct selling and operating costs	**13,754**	**14,396**	**(643)**	**-4.5%**

(1) Figures in this column are derived from the FY 2014 audited financial statements.
(2) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements.

The most significant fluctuations within the expense categories are in employee benefit expenses and laboratory expenses.

Employee benefit expenses decreased from €7.0 million in 2013 to €6.1 million in 2014. This decrease in employee expenses can primarily be explained by an increase in government grants received of €1.5 million relating to specific development projects and programs (recorded as a deduction of employee expenses) for continuing operations. This increase in deductions is partially offset by an increase in employee expenses as a result of higher average FTE’s (78.2 in 2014 compared to 73.5 in 2013).

Laboratory expenses increased from €0.9 million in 2013 to €1.2 million in 2014, as since then the Company started spending more on lab consumables for (non-YXY) Renewable Chemistries projects in line with the Group’s business strategy.

10.5 Results of operations YXY Technology business reported as discontinued operations

Following the signing of the memorandum of understanding with BASF on 18 December 2015, the YXY Technology business is reported by the Group as discontinued / asset held for sale in the FY 2015 financial statements, including comparatives for the FY 2014 income in accordance with IFRS. The YXY Technology business transferred to the Joint Venture per 30 November 2016 and the historical financial information regarding the YXY Technology is described below as the results of the Joint Venture impact on the Group going forward. In the section below the results of the YXY Technology business are outlined.

Income statement for 9M 2016 compared to 9M 2015

(€ in thousands)	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	Change	
YXY Revenues	**319**	**220**	**99**	**45.0%**

(€ in thousands)	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	Change	
Direct selling expenses	232	446	(214)	-48.0%
Employee benefit expenses	2,424	3,003	(579)	-19.3%
Depreciation, amortization and impairment charge	103	1,295	(1,192)	-92.1%
Office and housing expenses	491	218	273	125.0%
Patent, license, legal and advisory expenses	1,196	685	511	74.7%
Laboratory expenses	911	695	216	31.1%
Marketing and representation expenses	181	138	43	30.9%
Other operating expenses	134	246	(112)	-45.5%
Total direct selling and operating costs	**5,671**	**6,725**	**(1,054)**	**-15.7%**

(1) Figures in this column are unaudited and are derived from the 9M 2016 interim consolidated condensed financial statements.
(2) Figures in this column are unaudited and are derived from the comparative figures in the 9M 2016 interim consolidated condensed financial statements.

Revenues increased from €0.2 million for the nine-month period ended 30 September 2015 to €0.3 million for the nine-month period ended 30 September 2016 as the Group sold more PEF to its partners.

The most significant fluctuations within the expense categories are in depreciation, amortisation and impairment charge, and employee benefit expenses. Employee benefit expenses decreased from €3.0 million for the nine-month period ended 30 September 2015 to €2.4 million for the nine-month period ended 30 September 2016. This decrease can primarily be explained by a decrease in average FTE from 48.5 at for the nine-month period ended 30 September 2015 to an average FTE of 44.5 for the nine-month period ended 30 September 2016. Furthermore, recognised subsidies related to pilot plant capital expenditures increased from €0.1 million for the nine-month period ended 30 September 2015 to €0.3 million for the nine-month period ended 30 September 2016, resulting in lower employee benefit expenses. Laboratory expenses increased from €0.7 million for the nine-month period ended 30 September 2015 to €0.9 million for the nine-month period ended 30 September 2016, mainly due to more equipment in the Pilot Plant and subsequent maintenance and consumables. The decrease in depreciation, amortisation and impairment charge is due to the fact that the YXY Technology business has been reported as held for sale during the nine-month period ended 30 September 2016, and in accordance with IFRS, no depreciation charges were recorded within YXY Technology business, merely an impairment charge in relation to the relocation of the Pilot Plant amounting to €0.1 million.

Income statement for FY 2015 compared to FY 2014

(€ in thousands)	FY 2015 (*1)	FY 2014 (*2)	Change	
YXY Revenues	**304**	**678**	**(374)**	**-55.2%**

(€ in thousands)	FY 2015 (*1)	FY 2014 (*2)	Change	
Direct selling expenses	927	2,914	(1,987)	-68.2%
Employee benefit expenses	3,881	3,743	138	3.7%
Depreciation, amortization and impairment charge	1,825	1,189	636	53.5%
Office and housing expenses	304	343	(39)	-11.4%
Patent, license, legal and advisory expenses	871	511	360	70.5%
Laboratory expenses	979	1,050	(71)	-6.8%
Marketing and representation expenses	217	243	(26)	-10.7%
Other operating expenses	340	379	(39)	-10.3%
Total direct selling and operating costs	**9,344**	**10,372**	**(1,028)**	**-9.9%**

(1) Figures in this column are derived from the FY 2015 audited financial statements.
(2) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements.

Revenues decreased from €0.7 million in 2014 to €0.3 million in 2015. This was mainly due to the delivery of more PEF to new partners for development and without revenue than in 2014, where predominantly PEF was delivered under joint development agreements with revenue.

The most significant fluctuations within the expense categories are in direct selling expenses, depreciation, amortisation and impairment charge and in patent, license legal and advisory expenses.

Direct selling expenses decreased from €2.9 million in 2014 to €0.9 million in 2015. This decrease is related to decreased revenue. Produced PEF is more used for development purposes, internally and externally, without revenue, as opposed to 2014 where predominantly PEF was delivered under joint development agreement.

Depreciation, amortisation and impairment charges increased from €1.2 million in 2014 to €1.8 million in 2015. This is the result of additional capex investments in the YXY Technology business in line with the Group's business strategy.

Patent, license, legal and advisory expenses increased from €0.5 million in 2014 to €0.9 million in 2015, which is mainly the result of consultancy fees in relation to the formation of the Joint Venture.

Income statement for FY 2014 compared to FY 2013

(€ in thousands)	**FY 2014 (*1)**	**FY 2013 (*2)**	**Change**	
YXY Revenues	**678**	**1,913**	**(1,235)**	**-64.6%**

(€ in thousands)	**FY 2014 (*1)**	**FY 2013 (*2)**	**Change**	
Direct selling expenses	2,914	1,630	1,284	78.8%
Employee benefit expenses	3,743	2,802	941	33.6%
Depreciation, amortization and impairment charge	1,189	1,364	(175)	-12.8%
Office and housing expenses	343	346	(3)	-0.9%
Patent, license, legal and advisory expenses	511	690	(179)	-25.9%
Laboratory expenses	1,050	1,020	30	2.9%
Marketing and representation expenses	243	227	16	7.0%
Other operating expenses	379	869	(490)	-56.4%
Total direct selling and operating costs	**10,372**	**8,948**	**1,424**	**15.9%**

(1) Figures in this column are derived from the FY 2014 audited financial statements.
(2) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements.

Revenues decreased from €1.9 million in 2013 to €0.7 million in 2014. This was mainly due to the nature of the joint development agreements in 2013, where more revenues were obtained at an earlier stage of the agreement, according to the project milestones.

The most significant fluctuations within the expense categories are in direct selling expenses, employee benefit expenses, and other operating expenses. Direct selling expenses increased from €1.6 million in 2013 to €2.9 million in 2014. This increase can primarily be explained by the increase in scale of production of FDCA and PEF, both by the Pilot Plant and by external toll manufacturers. Employee benefit expenses increased from €2.8 million in 2013 to €3.7 million in 2014. This is the result of the increase of the number of FTE for the YXY Technology business. Other operating expenses decreased from €0.9 million in 2013 to €0.4 million in 2014, which is primarily the result of fewer external trials on development of PEF and FDCA, which was partly replaced by production, and thus higher direct selling expenses.

10.6 Results of operations of the Pharma business reported as discontinued operations

We provide in this paragraph historical financial information for 2013 and 2014. Avantium Pharmatech B.V. was effectively sold per 31 December 2014 and subsequently only elaborate in this paragraph on the Pharma business for 2013 and 2014.

Income statement for FY 2014 compared to FY 2013

(€ in thousands)	FY 2014 (*1)	FY 2013 (*2)	Change	
Pharma business revenues	**2,095**	**1,731**	**364**	**21.0%**

(€ in thousands)	FY 2014 (*1)	FY 2013 (*2)	Change	
Direct selling expenses	593	473	120	25.4%
Employee benefit expenses	358	195	163	83.8%
Depreciation, amortization and impairment charge	121	455	(334)	-73.4%
Office and housing expenses	184	182	2	1.3%
Patent, license, legal and advisory expenses	271	234	38	16.1%
Laboratory expenses	11	10	0	4.5%
Marketing and representation expenses	138	126	11	9.0%
Other operating expenses	54	82	(29)	-34.8%
Total direct selling and operating costs	**1,730**	**1,758**	**(28)**	**-1.6%**

(1) Figures in this column are derived from the FY 2014 audited financial statements.
(2) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements.

Revenues increased from €1.7 million in 2013 to €2.1 million in 2014. This was mainly due to additional sales efforts and the launch of new products. As a result direct selling expenses increased in 2014 with €0.1 million compared to 2013. An additional FTE and a higher success bonus for the employees led in 2014 to an increase of the employee benefit expenses with €0.2 million compared to 2013. The main reason for the lower impairment charge in 2014 compared to 2013 is that in 2013 an existing earn out related to the Group's Pharma business disposed in 2011 was fully impaired.

10.7 Segment information

The Group has incorporated IFRS 8, segment reporting, into the financial statements for the first time in 2015 (including 2014 comparative information), allowing stakeholders to gain further valuable segment information of the Group. The Group identifies three segments, in line with the Group's businesses (i) YXY Technology (since 30 November 2016 with effective date as of 1 July 2016 operated through the Joint Venture with BASF), (ii) Renewable Chemistries and (iii) Catalysis.

The main financial KPI of the Group is an adjusted EBITDA figure that excludes overhead and is focused on the direct cash contribution of the businesses. The adjusted EBITDA is calculated in the following manner:

Operating profit / loss + depreciation, amortisation and impairment charges (if any) -/- capital expenditures (CAPEX).

Operating profit is corrected for non-cash depreciation, amortisation and impairment charges as recognised in the income statement and for capital expenditures (cash out), as these are recorded as assets in the balance sheet and are not recognised in the income statement.

The adjusted EBITDA figures of the business segments are as follows:

in Euro x 1,000	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	FY 2015 (*3)	FY 2014 (*4)
Catalysis	1,253	1,665	2,898	1,979
Renewable Chemistries	(732)	(1,016)	(797)	253
YXY	(7,987)	(6,021)	(8,482)	(9,499)
Total adjusted EBITDA	**(7,466)**	**(5,372)**	**(6,381)**	**(7,267)**

(1) Figures in this column are unaudited and derived from the 9M 2016 interim consolidated condensed financial statements.
(2) Figures in this column are unaudited and are derived from the comparative figures in the 9M 2016 interim consolidated condensed financial statements.
(3) Figures in this column are derived from the FY 2015 audited financial statements.
(4) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements.

The adjusted EBITDA can be reconciled with the profit before income tax from continuing operations as follows:

in Euro x 1,000	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	FY 2015	FY 2014
Total adjusted EBITDA	**(7,466)**	**(5,372)**	**(6,381)**	**(7,267)**
Amortisation	(90)	(41)	(53)	(209)
Depreciation	(589)	(1,701)	(2,393)	(2,100)
Finance costs - net	(1,433)	(2,480)	(2,496)	(548)
CAPEX	3,037	1,657	2,317	1,820
Share based compensation	(1,128)	(586)	(1,005)	(935)
Rent	(892)	(694)	(1,042)	(701)
Release decommissioning provision	-	277	277	-
Results of discontinued operation	5,352	7,022	9,828	9,899
Other	(3,487)	(1,268)	(2,402)	(4,415)
Profit before income tax from continuing operations	**(6,696)**	**(3,185)**	**(3,350)**	**(4,456)**

(1) Figures in this column are unaudited and derived from the 9M 2016 interim consolidated condensed financial statements.
(2) Figures in this column are unaudited and are derived from the comparative figures in the 9M 2016 interim consolidated condensed financial statements.
(3) Figures in this column are derived from the FY 2015 audited financial statements.
(4) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements.

10.8 Liquidity and capital resources

The Group's primary sources of liquidity have been the operating cash flow generated from the Catalysis division and, until its disposal per 31 December 2014, of Avantium Pharmatech B.V., equity financing and government subsidies. See section 1.1 "Overview", subsection "Source of funds" for more details on the main sources of funds of the Group in the past.

Cash flows

The following table sets forth the principal components of the Group's cash flows in 9M 2016, 9M 2015, FY 2015, FY 2014 and FY 2013, as furthermore outlined in Chapter 9 "Selected Historical Financial Information".

(€ thousands)	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	FY 2015 (*3)	FY 2014 (*4)	FY 2013 (*5)
Net cash used in operating activities[1]	(2,514)	(3,299)	(2,338)	(5,324)	(7,877)
Net cash used in investing activities	(300)	(1,656)	(2,317)	(1,820)	(1,986)
Net cash generated from financing activities	20,000	44	343	27,298	11,421
Cash flow from discontinued operations[2]	(10,316)	(6,403)	(7,847)	(6,440)	(37)
Cash and cash equivalents at the beginning of the period	6,981	19,140	19,140	5,425	3,904
Cash and cash equivalents at period end	13,852	7,827	6,981	19,140	5,425

The line item Net cash used in operating activities includes the effect of exchange rate changes.

(1) Figures in this column are unaudited and derived from the 9M 2016 interim consolidated condensed financial statements.
(2) Figures in this column are unaudited and are derived from the comparative figures in the 9M 2016 interim consolidated condensed financial statements.
(3) Figures in this column are derived from the FY 2015 audited financial statements.
(4) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements.
(5) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements.

Cash flow from operating activities

The Group's presented cash outflow from operating activities decreased by €2.6 million in 2014 compared to 2013 and subsequently decreased by €3.0 million to €2.3 million in 2015. For the nine-month period ended 30 September 2016 this cash outflow decreased by €0.8 million compared to the nine-month period ended 30 September 2015. The Group's net cash used in operating activities decreased from €7.9 million in 2013 to €5.3 million in 2014, a decrease of €2.6 million. This decrease in net cash used is primarily due to the fact that the YXY Technology was no longer recorded as continuing operations in 2014.

The 2014 to 2015 decrease in net cash used can primarily be explained by a positive working capital movement of €2.1 million driven by prepaid subsidies and by an improvement in the result for the year from continuing operations, which had a positive effect of €1.1 million. The Catalysis business had more revenue and less costs, partially offset by more expenses within the Renewable Chemistries business.

For the nine-month period ended 30 September 2015 compared to the nine-month period ended 30 September 2016, the decrease in net cash used in operating activities can be primarily explained by a positive effect in working capital movements.

Cash flow from investing activities

The Group's cash out flow from investing activities includes capital expenditures for the three business units YXY Technology, Renewable Chemistries and Catalysis. Expenditures decreased by €0.2 million in 2014 from €2.0 million in FY 2013, compared to €1.8 million in FY 2014, and subsequently increased by €0.5 million to €2.3 million in FY 2015, mainly driven by new YXY Technology engineering costs and increased Catalysis investments in lab equipment and technology and software in 2015. In 2015 expenditures included €0.8 million of investments in the Pilot Plant (2014: €0.9 million), €0.4 million for engineering the Reference Plant (2014: nil), €0.1 million for Renewable Chemistries' lab equipment (2014: €0.1 million) and €0.8 million (2014: €0.4 million) of Catalysis investments. In 2015, investments have been made in strengthening the technological basis of the lab infrastructure in Amsterdam to perform services programs, adding new hardware to enable growth of the refinery catalyst testing business. The sustainable level of capital expenditures is an average of 2013-2015, which is approximately 5% of the revenue.

In the nine-month period ended 30 September 2016 the cash outflow from investing activities decreased by €1.4 million compared to the nine-month period ended 30 September 2015. This is the result of YXY Technology related investments in 2016, consisting primarily of capital expenditures in relation to the Pilot Plant. In 2016, the YXY Technology was classified as assets held for sale and therefore these investments are included in the category cash flow from discontinued operations.

Cash flow from financing activities

In 2013, Avantium issued convertible bonds for the aggregate amount of €10 million, which were converted into Shares in 2014. In addition, the Group received € 1.2 million following the innovation loan agreement and €0.2 million from interest on outstanding deposits. In May 2014, Avantium issued new Shares to existing Shareholders and development partners, which had a positive cash effect of €26 million. Subsequently, additional capital was raised in December 2014, amounting to €1.3 million. As a result, the Group's cash in flow from financing activities increased from €11.4 million in 2013 to €27.3 million in 2014, or an increase of €15.9 million.

The Group's cash in flow from financing activities decreased from €27.3 million in 2014 to €0.3 million in 2015, a decrease of €27.0 million as no financing rounds have taken place in 2015. The 2015 net cash generated from financing activities consist for €0.1 million of received interest and for €0.2 million of accrued interest that is added to the outstanding loan amount.

In March 2016, Avantium issued convertible bonds for the amount of €20.0 million (the Convertible Loans). This causes the net cash generated from financing activities to increase with €20.0 million for the nine-month period ended 30 September 2016 compared to the nine-month period ended 30 September 2015.

Cash flow from discontinued operations

The movement in cash outflow from discontinued operations in 2014 of €6.4 million to €7.8 million in 2015, is mainly the result of the repayment of a profit participating loan amounted to €1,650 thousand, following the sale of the Pharma business at the beginning of 2015, and is partially offset by working capital movements. The movement for the nine-month period ended 30 September 2016 compared to the nine-month period ended 30 September 2015 in cash outflow, is mainly the result of capital expenditures in YXY Technology during the nine-month period ended 30 September 2016, where the nine-month period ended 30 September 2015, these were recorded as part of continuing operations.

Borrowings

Innovation loan

In October 2010, the Group acquired an innovation loan facility of €4 million from "Rijksdienst Voor Ondernemend Nederland" (RVO). The loan, including accrued interest must be repaid between 2016 and 2021 in six instalments (first year: 10%; second year: 20%; third year: 20%; fourth year: 25%; fifth year: 25%; sixth year 2020: accrued interest). RVO agreed on Avantium postponing the repayment of the first instalment until December 2016. The Group started drawing the innovation loan facility in 2012 to finance part of the Pilot Plant assets. The current draw down is €4 million. The loan has a fixed interest rate of 6.2% per annum and on 30 September 2016 the accumulated interest is €1.0 million. Pursuant to the loan documentation, the Group must ensure that all IP relating to the developments as a result of the loan facility remain effectively protected. Furthermore, the Group is obliged to make a repayment on the loan amounting to 26.14% of any possible proceeds from the sale of a prototype developed as a result of the loan facility. Repayment of the innovation loan up to an amount of €2 million is guaranteed by ABN AMRO Bank N.V. on behalf of the Group. There are no conditions attached to the guarantee. The guarantee cannot be transferred or pledged.

Convertible Loans Agreement

On 25 March 2016, the Company, PMV and FPIM and certain of its existing Shareholders, including Sofinnova, Capricorn, ING Participaties, Navitas, Aster II and Timber Invest 1 (together, the CLA Lenders) entered into a subordinated convertible loans agreement (the CLA) for the principal amount of €20 million. The total outstanding amount of the CLA will be converted into Shares at a conversion price of 75% of the Offer Price prior to Settlement. See Chapter 20 "General Information", section 20.3 "Material contracts" sub "Convertible Loans" for more information on the CLA.

Secured bank loans

The Company has entered into a credit facility of €2 million with ABN AMRO Bank N.V. and a € 0.6 million guarantee facility. All assets, excluding the intangible assets and the finance lease assets, of the following subsidiaries, are pledged to the ABN AMRO Bank N.V.:

- Avantium Holding B.V.
- Avantium Technologies B.V.
- Avantium Support B.V.
- Avantium Cleantech B.V.
- Avantium Chemicals B.V.

The Group's credit facility with ABN AMRO Bank N.V. currently contains a financial covenant that the solvency ratio (based on the Group's tangible net worth) is at all times more than 35% of the Group's (adjusted) balance sheet total and is calculated as set out below. On 30 September 2016, the solvency ratio amounted to 71%. Currently, the Group has not drawn the credit facility.

Tangible net worth means:

- the equity capital (consisting of the issued and paid-up share capital, the share premium reserves, revaluation reserve to the extent that it relates to revalued real estate, other statutory reserves (e.g. in relation to share repurchases), reserves required under the articles of association (to the extent these were created for capital maintenance purposes) and other reserves (e.g. the distributed profits and/or losses for prior financial years and the undistributed profit for the current financial year)),
- increased by the deferred tax liabilities with respect to revalued real estate,
- increased by the – in relation to, inter alia, ABN AMRO Bank N.V. – subordinated debts owed to third parties or shareholders,
- decreased by the intangible fixed assets,
- decreased by the deferred tax assets (tax receivables),
- decreased by the participating interests (including minority interests),
- decreased by the debts owed by shareholders/directors and participating interests (including minority interests) and group companies, and finally
- decreased by the shares held by (Avantium) in its own capital,
- all as shown in the annual accounts.

Adjusted balance sheet total means:

- the balance sheet total,
- decreased by tangible fixed assets,
- decreased by the deferred tax assets (tax receivables),
- decreased by the participating interests (including minority interests),
- decreased by the debts owed by shareholders/directors and participating interests (including minority interests) and group companies, and finally
- decreased by the shares held by (the Group) in its own capital,
- all as shown in the annual accounts.

For a description of the credit facility, see Chapter 20 "General Information", section 20.3 "Material contracts", under "Finance agreements".

10.9 Contractual obligations

Operating lease commitments

In September 2014, Avantium extended the lease agreement for its facilities in Amsterdam at the Zekeringstraat 29 and 31. The term of this agreement is ten years with options to extend this agreement. The operating lease commitments under the lease agreement are €11.4 million in 2015 (2014: €1.6 million). The future aggregate minimum lease payments under the operating leases are as follows:

(€ in thousands)	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	FY 2015 (*3)	FY 2014 (*4)	FY 2013 (*5)
No later than 1 year	749	859	953	840	827
Later than 1 year and no later than 5 years	3,142	3,713	3,812	809	1,764
Later than 5 years	4,727	6,952	6,593	-	-
	8,618	**11,524**	**11,358**	**1,648**	**2,591**

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(4) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements.
(5) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements.

Financial lease commitments

The Group leased certain software by means of a financial lease. The aggregate minimum lease payments under the financial leases are as follows:

(€ in thousands)	Q3 YTD 2016 (*1) Unaudited	Q3 YTD 2015 (*2) Unaudited	FY 2015 (*3)	FY 2014 (*4)	FY 2013 (*5)
No later than 1 year	-	2	-	5	4
Later than 1 year and no later than 5 years	-	-	-	-	5
Later than 5 years	-	-	-	-	-
	-	**2**	**-**	**5**	**9**
Future finance changes on finance leases	-	-	-	(1)	(1)
Present value of finance lease liabilities	-	**2**	-	**5**	**8**

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(4) Figures in this column are derived from the comparative FY 2014 figures in the FY 2015 audited financial statements.
(5) Figures in this column are derived from the comparative FY 2013 figures in the FY 2014 audited financial statements.

10.10 Off balance sheet arrangements

The Group does not have any off balance sheet commitments other than those described in the preceding section under "Contractual obligations".

10.11 Critical accounting estimates and judgments

When preparing financial statements, the Group has to apply critical accounting estimates and judgments which are assessed by the Group's auditor. Estimates are well-balanced and based on appropriate supporting evidence. The Group believes the following accounting estimates and judgments are critical.

Tax losses carried forward

As at 30 September 2016, no deferred tax asset for the tax losses carried forward has been recorded by the Company. The Group assessed amongst others the tax impact of incorporation of the Joint Venture and sale of YXY Technology's IP and concluded no deferred tax asset should be recognised as per 30 September 2016 insufficient taxable income from the Joint Venture, Catalysis or Renewable Chemistries is expected for FY 2016 or FY 2017 to offset the existing carry-forward losses.

Revenue recognition

The Group recognises revenue when the amount of revenue can be reliably measured, if it is probable that future economic benefits will flow to the entity and if all revenue recognition criteria of IAS18 have been met. The Group bases its estimates on historical results, taking into consideration the type of customer, the type of contract and the specifics of each customer project. The Group recognises revenue based on the percentage of completion method, typically by reference to the project costs incurred up to the end of the reporting period as a percentage of total estimated costs for each project. The Group has sufficient internal control processes in place to properly estimate and recognise revenue.

Provisions and accruals

The Group recognises provisions and accruals in accordance with IAS37, when the Group has a current legal or constructive obligation as a result of past events, if it is probable that an outflow of resources will be required to settle the obligation, and if the amount can be reliably estimated.

The Group provides for the estimated cost of product warranties and product returns at the time revenue is recognised and the Group has a constructive obligation. A warranty provision is established based on the Group's best estimates of the amounts necessary to settle future and existing claims on products sold as of the balance sheet date. Product return provisions are based on historical experiences.

The Group estimates and recognises a liability accrual (2015: €0.7 million) and an expense for bonuses where contractually obliged or where there is a past practice that has created a constructive obligation.

Share based payments

The Group operates a share-based compensation plan for its employees and reports thereon in accordance with IFRS. The Group measures options granted to employees at the fair value of the equity instruments granted (indirect method of measurement). Fair value is determined through the use of an option-pricing model. As of the date of this Prospectus, there was no published share price information available. Consequently, the Company needed to estimate the fair value of its Shares and the expected volatility of that value. Based on these estimations, a share based compensation expense is periodically recognised under the expense category 'Employee benefit expenses' (€1.0 million in FY 2015) and in the balance sheet under 'Other reserves' (€5.3 million in FY 2015).

10.12 Working capital statement

The Company is of the opinion that the Group has sufficient working capital for its present requirements, that is, for at least the next twelve months from the date of the publication of this Prospectus.

10.13 Significant change in the Company's financial or trading position

On 30 November 2016, Avantium established a Joint Venture with BASF. The Joint Venture intends to build and operate the Reference Plant and subsequently to license the YXY Technology to BASF and others to enable global industrial scale production of FDCA and PEF as from 2021. See Chapter 11 "Business", section 11.4.1 "YXY Technology". Avantium contributed to the Joint Venture the YXY Technology and employees, all assets relating to the YXY Technology including the Pilot Plant and the related patents and knowhow. In return, Avantium received a non-controlling interest of 49% in the Joint Venture (replacing the assets and liabilities related to assets held under sale) and the entitlement to Earn-out payments. See section 10.3 "Key factors affecting the Group's results of operations and financial condition" under "Impact of results of the Joint Venture".

In December 2016, the Group acquired for US$1.5 million (€1.4 million) in cash the main assets (i.e. patent portfolio, knowhow and hardware) from Liquid Light.

11 BUSINESS

Certain statements in this Chapter may constitute "forward-looking statements". Such statements are subject to risks, uncertainties and other factors, including those set forth in Chapter 4 "Risk Factors", which could cause the Group's future results of operations, financial position or cash flows to differ materially from the results of operations, financial position or cash flows expressed or implied in such forward looking statements. See Chapter 5 "Important Information", section 5.9 "Forward-looking statements" for a discussion of risks associated with reliance on forward-looking statements. Key terms used in this Chapter are explained in Chapter 21 "Glossary of Selected Terms", section 21.2 "Certain technical terms".

11.1 Overview

Avantium is a leading chemical technology company in developing and commercialising innovative renewable chemistry solutions as sustainable alternatives to fossil-based chemicals and materials.[6]

Avantium aims to develop ground-breaking proprietary chemical technologies and production processes to convert biobased feedstock into high-performing, cost-competitive and sustainable products, together with its partners around the world. Avantium also provides advanced catalysis R&D services and systems to renowned chemical, refinery and energy companies.

Avantium's market opportunity is driven by the increasing demand for renewable chemicals. While there is an ongoing process of innovation and technological development in the chemical industry, petroleum (oil) is currently still the primary feedstock for chemicals. Chemicals are utilised as building blocks for materials, such as plastic bottles for beverages, films for food packaging and electronics, fibres for textiles, coatings and engineering plastics.

Rapidly increasing consumption, driven by a growing population and rising prosperity in developing countries, together with climate change concerns, puts pressure on the use of fossil resources.[7] Consumers are becoming more conscious of the sustainability of products and production methods[8] and have become more vocal in demanding accountability from manufacturers and brand owners on sustainability.[9] Climate change regulations and initiatives are increasing[10] and can drive up the cost of fossil resources and carbon dioxide CO_2 emitting processes. In 2015, The United Nations Climate Change Conference in Paris set ambitious targets for reduction of CO_2 and other greenhouse gas emissions.[11] The chemical industry is required to accelerate the transition to renewable feedstock and sustainable processes and to adopt new process technologies to produce chemicals and materials on the basis of renewable resources.[12]

Avantium is a pioneer in the emerging industry of renewable and sustainable chemistry representing a massive market potential.

The Group's business comprises (i) the "YXY Technology", converting plant-based sugars into FDCA and biobased chemicals and plastics, like PEF, operated through the Joint Venture with BASF, (ii) "Renewable Chemistries", researching and developing processes for the conversion of biomass feedstock to chemical building blocks and plastic materials, and (iii) "Catalysis", a catalysis research service provider to an international customer base of several leading chemical, refinery and energy companies. For a more detailed description of these businesses, see section 11.4 "Businesses" below.

YXY Technology

Avantium has developed the proprietary YXY Technology to catalytically convert plant-based sugar (fructose) into a wide range of biobased chemicals and plastics, like polyethylene-furanoate, or **PEF**. PEF is a 100% biobased, 100% recyclable plastic with superior performance properties compared to today's widely used plastics packaging materials that are made from petroleum. These properties make PEF an attractive alternative to PET (the omnipresent plastic used for bottles and a host of other products, made ultimately from petroleum) and other packaging materials such as aluminium, glass, cartons. On an industrial scale, various PEF grades offer a cost-effective solution for applications ranging from bottles to packaging film and in the long term also fibres, positioning it to become the next generation packaging material. Illustratively, the end markets for these packaging materials represent an aggregate annual turnover of over US$200 billion.[13]

6 Evidenced by (*inter alia*) statements from the European Commission in the Sugar Platform to biofuels and biochemicals - Final report for the European Commission Directorate-General Energy – April 2015.
7 Www.iea.org/publications/freepublications/publication/Resources2013.pdf.
8 Morgan Stanley blue paper 2012 – 'Green is good' – The potential of bioplastics.
9 Www.pwc.com/gx/en/forest-paper-packaging/pdf/sustainable-packaging-threat-opportunity.pdf.
10 Www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/how-companies-can-adapt-to-climate-change.
11 Www.unfccc.int/resource/docs/2015/cop21/eng/l09.pdf.
12 Www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf.
13 See Chapter 12 "Industry".

The main building block of PEF is furandicarboxylic acid, or **FDCA**, listed by the US Department of Energy as #2 in Top-12 value added chemicals for establishing the "green" chemistry industry of the future, as it is a key component for a wide range of biobased chemicals and plastics.[14] Industrial production of FDCA has been pursued and researched for over a century without success.[15] Avantium believes that the YXY Technology will unlock the high potential of the FDCA market. Illustratively, the end markets for these packaging materials represent an aggregate annual turnover of over US$100 billion in addition to the PEF end markets.[16]

On 30 November 2016, Avantium established a 49:51 joint venture with BASF to commercialise the YXY Technology (the Joint Venture), to which Avantium contributed the YXY Technology, the FDCA pilot plant in Geleen that has been operational since 2011 (the Pilot Plant), and the related patents and knowhow. The name of the Joint Venture is Synvina C.V. The Joint Venture intends to build and operate the first commercial scale plant for the production of FDCA (the Reference Plant). Construction of the Reference Plant is expected to start by the end of 2018, with sales of FDCA and PEF expected to commence in 2021. The Joint Venture intends to subsequently license the YXY Technology to BASF and others to enable global industrial scale production of FDCA and PEF as from 2021.

The Joint Venture intends to be the first to commercialise PEF as a game-changing material used in packaging, fibres and other PEF applications. The Joint Venture aims to continue the developing work done with partners such as The Coca Cola Company, Danone, ALPLA and Mitsui. The performance and scalability of the YXY Technology have been proven at pilot plant scale at the Pilot Plant, which has a similar organisational structure and meets the same regulatory requirements as a commercial scale plant. As a first mover, Avantium has been able to build an extensive IP portfolio covering the entire value chain, which has been contributed to the Joint Venture.

Renewable Chemistries

Renewable Chemistries is Avantium's development division with a portfolio of new projects focusing on the conversion of biomass to chemical building blocks and plastic materials. It operates on the basis of the Group's extensive experience and expertise in catalysis R&D, processing and conversion of biomass feedstock, chemical process design and pilot scale operations.

The YXY Technology is the Company's furthest advanced technology that was initially developed by the Renewable Chemistries team. Two other projects have reached or are entering pilot plant stage: Project Zambezi and Project Mekong. Both projects are also complementary to (but not dependent on) the YXY Technology (owned by the Joint Venture).

Project Zambezi aims for a cost-effective process for the production of high-purity glucose from non-food biomass that can be converted into bio chemicals such as FDCA, Lactic acid and antibiotics. Project Mekong is a one-step process for the production of mono-ethylene glycol, or **MEG**, from glucose. Today's market for MEG is predominantly fossil-based and represents an annual turnover of over US$20 billion. Biobased MEG is chemically identical to fossil-based MEG. Avantium intends to start the construction of dedicated pilot plants for these projects in the next two years.

Project Volta is in lab stage and comprises the direct use of electricity in chemical processes including the conversion of CO_2 to chemical building blocks.

Four other projects are currently in lab stage and two projects are in concept stage.

Catalysis

For over 15 years, Catalysis has been providing advanced catalysis R&D services and systems to companies in the chemical, refinery and energy sector. The Group has developed a strong, international customer base including several industry leaders. Avantium helps its customers to innovate faster with a higher probability of success and to shorten the time-to-market of new catalysts. Avantium gained considerable experience and expertise from its Catalysis business and has supported the development of numerous new catalysts and new and improved chemical processes for its customers.

11.2 Competitive strengths

Pioneer in the area of renewable chemistry, developing and commercialising innovative renewable and sustainable chemistry solutions as demonstrated by the unique YXY Technology

The demand for renewable and sustainable materials is developing fast. Avantium is a pioneer in the area of renewable chemistry and has a proven track record of developing advanced chemical catalysed production processes.

[14] Www.nrel.gov/docs/fy04osti/35523.pdf.
[15] Www.bioconsept.eu/wp-content/uploads/BioConSepT_Market-potential-for-selected-platform-chemicals_report1.pdf.
[16] See Chapter 12 "Industry".

Since 2006, Avantium has been a leader in the development of novel chemical catalytic processes for the production of FDCA and PEF, derived from biomass feedstock. Avantium believes it was the first in 2009 to test PEF in a wide range of applications, such as bottles, fibres and film. In 2011, Avantium was the first company to build an FDCA pilot plant with a nameplate capacity of 15 ta FDCA. This Pilot Plant has enabled Avantium to produce FDCA and PEF for the further development of the YXY Technology, enabling Avantium to test PEF through its partners and to continue its process development efforts to improve the economics of the process and to strengthen its engineering package in preparation for the scale up to commercial and industrial scale. As a first mover, Avantium has been able to build an extensive IP portfolio: the YXY Technology is currently protected by 63 active patent families[17] covering each step of the production process of FDCA, PEF and selected PEF applications in bottles, fibre and film. Because the IP portfolio is relatively young, it provides patent protection for a relatively long time.

Throughout the years, Avantium (i) has gained significant expertise and experience in developing innovative chemical processes as demonstrated in its Catalysis business and by the YXY Technology, (ii) has built up knowledge and know-how needed to scale up its inventions and (iii) has demonstrated it can lead breakthrough technologies to commercialisation stage, such as the YXY Technology, by entering into collaborations with over 20 partners, including The Coca-Cola Company, Danone, ALPLA, and Mitsui and by attracting BASF as partner of the Joint Venture. Avantium believes that the YXY Technology has the potential to become the most cost-effective process for making FDCA and PEF.

PEF, YXY Technology's lead product, is strongly positioned to become the next generation packaging material based on its unique set of properties

PEF is a 100% biobased, 100% recyclable plastic with superior performance properties compared to today's widely used packaging plastics that are made from petroleum. These properties make PEF an attractive alternative to PET and other packaging materials such as aluminium, glass and cartons.

PEF has superior barrier and more attractive thermal and mechanical properties compared to PET and offers a reduced carbon footprint compared to PET at industrial scale.[18]

PEF allows for a wide range of applications, ranging from packaging of soft drinks, water, alcoholic beverages, fruit juices, food and non-food products (such as personal care and household products) to film and fibre applications. The market for such applications represents an annual turnover of more than US$200 billion.

Joint Venture with BASF to commercialise the YXY Technology, intending to build the first commercial scale FDCA plant, in anticipation of a global market pull for biobased materials from industry leaders

An integral part of Avantium's strategy and commercialisation roadmap has been the close involvement of strong partners throughout the entire value chain. Avantium has been able to attract global renowned partners, such as The Coca-Cola Company, Danone, Toyobo and ALPLA to develop PEF in the major bottle applications, and Mitsui to commercialise FDCA and PEF in specific applications in the Asian region. Following the incorporation of the Joint Venture, existing collaboration agreements have been transferred to the Joint Venture.

Avantium expects strong global market pull for biobased materials from industry leaders. Several of its collaboration partners have already publically stated that they aim to use a biobased alternative to fossil-based bottles in order to meet customer preference for biobased materials and to avoid potential increases in conventional hydrocarbon prices.[19]

BASF, the number one chemical company in the world[20], has shown exceptional support for the YXY Technology. In 2016, Avantium formed a Joint Venture with BASF to commercialise the YXY Technology and build the first commercial scale plant for the production of FDCA up to 50,000 ton scale (the Reference Plant). Avantium believes that the Joint Venture has a substantial lead over its competition as it intends to start producing FDCA and PEF on commercial scale as of 2021. Avantium also believes that the Joint Venture is uniquely positioned to roll out the YXY Technology globally through licensing and become the technology leader for FDCA and PEF.

Promising portfolio of innovations, with one project in pilot plant stage and one entering pilot plant stage, developed by a uniquely skilled Renewable Chemistries team

Avantium's Renewable Chemistries business researches and develops innovative projects aimed at delivering high performing and/or cost-competitive sustainable products and processes. Unlike many other companies, Avantium does not have a restricted technology deployment focus, as it has no existing production assets or established product markets to narrow the window for R&D. Over the past 15 years, by working for and with global leaders in catalytic process development, Avantium's multi-disciplinary Renewable Chemistries team has developed the skills to assess early stage opportunities with respect to future deployment potential, technology scale-up potential and economic potential.

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[17] Of which 16 patent families are currently still non-published.

[18] Eerhart, Faaij & Patel: *Replacing fossil-based PET with biobased PEF; process analysis, energy and GHG balance*, Energy & Environmental Science - Issue 4, 2012.

[19] IHS 2016: Bio-Based Furan Dicarboxylic Acid (FDCA) an Its Polymer Polyethylene Furanoate (PEF).

[20] American Chemical Society; www.cen.acs.org/articles/93/i30/Global-Top-50.html.

With its first project, the YXY Technology, in commercialisation stage, the team is now focusing on the further development of a broad portfolio of projects in various stages of development. The pipeline includes two advanced projects, both proven at lab scale and targeting existing, well defined and large addressable markets.

In Project Zambezi, Avantium is developing a cost-competitive production process for high-purity glucose from non-food biomass (also called 2G feedstock). Glucose is a widely used building block for the production of bio chemicals (such as FDCA, Lactic acid and antibiotics) and is currently produced from edible sources as no previous technology has been able to produce high quality glucose from non-food feedstock in an economical way. In Project Mekong, Avantium is developing a process of making MEG from glucose in a one step process which is price competitive with petroleum based MEG. MEG is mainly used for the production of polyester fibre and bottles. Approximately 1% of the MEG production of 25 million[21] ton per year, representing an annual turnover of US$25 billion (at US$1,000 per ton) is currently biobased, as biobased MEG is 30-35% more expensive than MEG derived from fossil feedstock.[22] Avantium intends to start the construction of dedicated pilot plants for these projects in the next two years.

Proven 15 year track record in providing advanced R&D services and systems to leading chemical, refinery and energy companies

For over 15 years, Catalysis has been providing advanced catalysis R&D services and systems to a strong base of global blue chips customers in the chemical, refinery and energy sector. Although the costs of a catalyst are relatively minimal, the impact of the performance on the chemical process is crucial to the economic performance of large chemical or refinery plants around the world.

Avantium offers customers a small-scale catalyst testing technology, which provides fast, reliable, low-cost and safe high-throughput catalyst testing capability with high accuracy and ease of use. It allows customers to save substantial costs and shorten time-to-market when developing new catalysts or optimising their existing chemical processes. Avantium also sells tailored systems to customers for their own catalyst testing. The Catalysis business is supported by an extensive network of industry experts and academic catalyst R&D centres. The Catalysis technology is protected by a portfolio of eleven patent families.

Avantium has extensive experience and expertise in this high tech field of catalysis R&D, which generates a high level of repeat customers and the stability and profitability of its Catalysis business.

Strong, entrepreneurial Management Team and a highly skilled workforce to execute on its strategy

Avantium employs over 90 people and the YXY Technology team, employed by the Joint Venture, comprises 50 people from around the world. This translates into cultural diverse teams representing over eighteen nationalities. Over 35% of these employees hold a PhD degree. All members of the Management Team have worked at large multinationals before joining Avantium, such as DSM, Unilever, Albemarle and AT&T. The Management Team is supported and challenged by an experienced Supervisory Board, chaired by Jan van der Eijk, the first CTO of Royal Dutch Shell.

In 2014, the European CTO of Year award was awarded to Avantium’s CTO, Gert-Jan Gruter, by the European Industry Research and Management Association. In 2016, Avantium’s CEO, Tom van Aken, received the award of Industry Champion of the Year, by World Bio Markets. Furthermore, Avantium has been in the Global Cleantech Top 100 for six years in a row.

11.3 Strategy

It is the Group’s goal to become a world leader in developing renewable and sustainable chemistry technology solutions and to commercialise these new technologies through partnering and licensing. The Group’s strategy regarding each of the three businesses is discussed in the following paragraphs.

YXY Technology

The Group aims to commercially deploy the YXY Technology, through the Joint Venture, by producing FDCA at the Reference Plant that it intends to build, and selling FDCA and PEF to third parties, and by subsequently selling Licences to third parties.

The Joint Venture’s strategy is (i) to continue to develop the market for FDCA and PEF, (ii) to prove the technology at commercial scale at the Reference Plant, (iii) to ensure global availability of FDCA and PEF by selling Licences, and (iv) to maintain technology leadership in FDCA and PEF.

In order to further develop the market demand for FDCA and PEF, initial focus of the Joint Venture will be on markets where specific grades of PEF allow to substitute higher price material such as aluminium, glass, multi-layer packaging and existing film applications. Subsequently, the Joint Venture aims to sell Licences of the YXY Technology based on market demand to third parties to produce and use FDCA or PEF or both. The Joint Venture expects that the global roll-out of the YXY Technology will lower the cost price of PEF as a result of

[21] Nexant Petrochemical Market Dynamics Polyester & Intermediates December 2014 (2014 MEG consumption).
[22] Tecnon Orbichem, May 2016.

economies of scale and continuous technology and process improvements. This could allow PEF to also compete in high volume commodity markets.

The Joint Venture aims to ensure that the YXY Technology will offer the best performance in terms of product performance and economics, which will enable the Joint Venture to maintain its technology leadership and successfully market FCDA and PEF and sell Licences. The Joint Venture will therefore continue to invest in improving the YXY Technology and application development for FDCA and PEF.

Renewable Chemistries

Renewable Chemistries aims to contribute to the circular economy. The circular economy is on the agenda of decision makers across business, government and academia and is an industrial system that is restorative and regenerative by design.[23] It rests on three main principles:

- preserving and enhancing natural capital by controlling finite stocks and balancing renewable resources;
- optimising resource yields, e.g. via improved recycling and using agricultural and forestry waste as feedstock; and
- fostering system effectiveness, including e.g. the reduction of greenhouse gases (**GHGs**).

This new economic model seeks to ultimately decouple global economic development from finite resource consumption.[24]The Renewable Chemistries business focuses on developing and commercialising innovative technologies in the area of renewable and sustainable chemistry. The flagship project initially run by the Renewable Chemistries business is the YXY Technology.

The strategy for Renewable Chemistries is to (i) evaluate the most promising development projects, (ii) explore partnerships and (iii) commercialise the current technologies. Through portfolio management and stage-gate approach, the Group intends to bring the Renewable Chemistries projects from ideation to proof-of-principle to a fully developed business case that forms the basis for partnering and attracting funding. The strategy to commercialise such technologies will be determined on a case to case basis. At each stage, the Group assesses which approach best suits each project, e.g. continuing on a stand-alone basis, partnering or selling the technology. The YXY Technology is regarded as an excellent example of how the Group can create value potential through innovation and entrepreneurial and result-oriented project management.

Reference is made to section 11.4.2 “Renewable Chemistries” for a detailed description on the next steps to further develop and commercialise Project Zambezi, Project Mekong and Project Volta.

Catalysis

The Group aims to maintain its technological leadership in advanced catalysis R&D and the stable and positive cash flows from its Catalysis business through the following initiatives:

- enhancing commercial competencies by improving sales and negotiations skills of the business development team and increasing the marketing activity of the Company;
- gradually increasing its revenue by further improving the current value proposition to its customers by focusing on major chemistries segments, innovating based on product market potential instead of sales opportunity and improving operational excellence to enhance reliability; and
- maximising its margin by standardising certain products and introducing a value based pricing policy as well as further customising products and introducing effort based pricing.

11.4 Businesses

The three businesses of the Group are YXY Technology (owned by the Joint Venture), Renewable Chemistries and Catalysis.

11.4.1 YXY Technology

Avantium has developed the proprietary YXY Technology to catalytically convert plant-based sugars into FDCA and a wide range of biobased chemicals and plastics like PEF. PEF is 100% biobased, 100% recyclable and has superior performance properties compared to today’s widely used packaging plastics.

These properties make PEF an attractive alternative to replace a much wider range of packaging materials such as aluminium, glass and cartons. On an industrial scale, the Company believes various PEF grades offer a cost-effective solution for applications ranging from bottles to packaging film and in the long term also fibres, making it well-positioned to become the next generation packaging material. The end markets for PEF represent an annual turnover of over US$200 billion.

In 2015, given the Group’s success in demonstrating the YXY Technology at pilot plant scale since 2011 and the formation of its partnerships, the Group considered several options to further commercialise the YXY Technology. The Group decided to favour a joint venture with BASF, the number one chemical company in the

[23] Www.ellenmacarthurfoundation.org.
[24] Www.ellenmacarthurfoundation.org.

world, which it believes will maximise the probability of success of the technology roll-out (see below under "Status and next steps").

Opportunity

The growing concerns about the use and cost of fossil fuels, the upcoming regulations regarding the use of (certain) plastics, the increased consumer awareness about renewable and sustainable features of products coupled with growing world consumption all have a clear impact on the plastics industry. Companies now focus on sustainable sourcing and green label products, as can be observed in the global "consumer-oriented" economy and notably in the major identified end-markets of PEF: packaging, fibre and film, where alternatives to existing fossil-based technologies are sought after.[25] [26]

FDCA is marketed as a biobased replacement for (fossil-based) terephthalic acid (**PTA**), a dominant compound in polymer and resin manufacture today like PET. PET is best known for its use in plastic bottles and other packaging. For more than a century, researchers have tried to make FDCA, given the large potential of FDCA[27], but no-one succeeded to find the key to an economic production process. Therefore FDCA was called a "sleeping giant".[28] FDCA was listed already in 2004 by the US Department of Energy as the number two in top-12 priority chemicals for establishing the "green" chemistry industry of the future.[29] Avantium believes that the YXY Technology's biobased FDCA will unlock the high potential of the FDCA market.

Technology

Applying the Group's expertise in advanced catalyst development, catalytic process technology and high-throughput evaluation, the Group believes that it is the first company to find an economically viable route to producing FDCA, the YXY Technology's main building block.

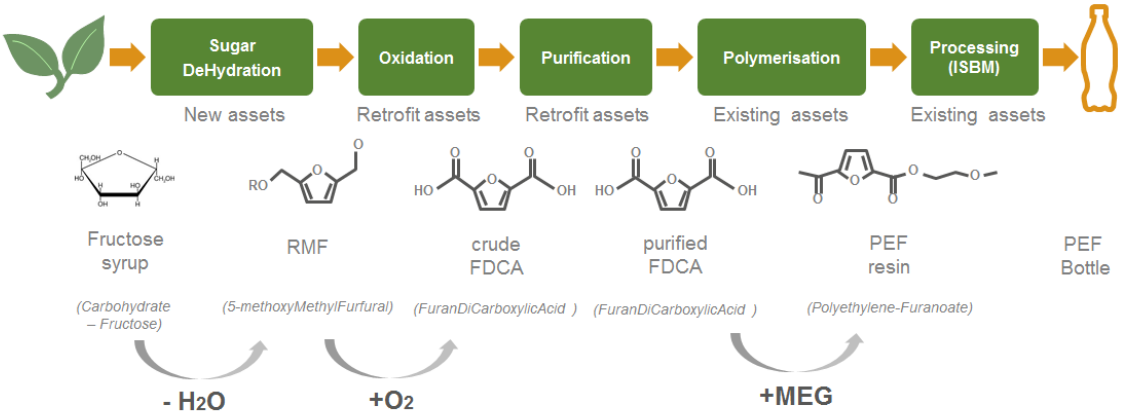
The YXY Technology can be divided into several catalytic steps, of which the following are (commercially) most important:

1. <u>Sugar dehydration (step 1)</u>: the catalytic dehydration (i.e. the removal of oxygen via water) of plant based sugars (high fructose syrup) in an alcohol, to make an alkoxymethyl-furfural (**RMF**) such as methoxymethyl furfural (**MMF**);

2. <u>Oxidation (step 2) and purification (step 3)</u>: the catalytic oxidation of an alkoxymethyl-furfural (such as MMF) in acetic acid to make furandicarboxylic (FDCA) and subsequent removal of product impurities via purification; and

3. <u>Polymerisation (step 4)</u>: combining FDCA and MEG through polymerisation to create the biobased polymer, polyethylene-furanoate (**PEF**).

These steps are demonstrated in the graph below.



Sugar dehydration (step 1) and oxidation (step 2) have already been proven at the Pilot Plant. Purification (step 3) is currently outsourced and is scheduled for implementation in the Pilot Plant by mid-2017. Step 1, 2 and 3 are intended to be performed at the Reference Plant. Polymerisation (step 4) of FDCA at the Pilot Plant is outsourced to third parties on a toll manufacturing basis. It is envisaged that polymerisation of FDCA produced at the Reference Plant will also be outsourced to one or more third parties on a toll manufacturing basis.

The conversion rate of high fructose syrup into PEF amounts to 50%, whereas the conversion rate of FDCA into

25 Www.pwc.com/gx/en/forest-paper-packaging/pdf/sustainable-packaging-threat-opportunity.
26 Www.smitherspira.com/news/2016/february/global-packaging-material-outlooks.
27 Www.bioconsept.eu/wp-content/uploads/BioConSepT_Market-potential-for-selected-platform-chemicals_report1.pdf.
28 Www.mdpi.com/2078-1547/3/2/212/pdf.
29 Www.nrel.gov/docs/fy04osti/35523.pdf.

PEF amounts to 105-115% due to the addition of MEG. The amount of MEG required for the polymerisation of FDCA is estimated to be approximately 40% of the total amount of FDCA used in the process.

The YXY Technology is a new and different method of FDCA production. It comprises a chemical catalytic process to produce MMF (5-methoxymethyl furfural), which is subsequently converted into FDCA. MMF is stable and can be purified by distillation.

Retrofitted assets

The sugar dehydration process is first of a kind and new technology performed in assets that do not exist to date at kilo ton per annum scale. The oxidation and purification processes to produce FDCA resemble the oxidation and purification processes to produce fossil based terephthalic acid (PTA). As a result oxidation and purification assets used for producing PTA can be used for producing FDCA after some modifications (retrofitting). Avantium considers a facility retrofitted if 60-80% of the hardware is already in place and capital expenditures are 60-80% less when comparing a plant retrofitted from PTA to FDCA with constructing a new FDCA plant. Polymerisation of FDCA and MEG to PEF can be performed in existing assets.

By-products

In the process of converting high fructose syrup into MMF (step 1), three main by-products are isolated, which are intended to be used or sold, thereby reducing the cost price of PEF by approximately 10%[30]:

1. Bio-oils: the Joint Venture intends to use the bio-oils isolated in this process as fuel for the Reference Plant, reducing the Joint Venture's use of fossil fuels. As an alternative, bio-oils could also be used as a basic material for compost or other higher value applications;

2. Furfural: a chemical product, currently already widely produced as a by-product of sugar cane processing, that can be used for several purposes such as an odorant, solvent or wood treatment agent. The Joint Venture intends to sell the furfural produced at the Reference Plant to third parties;

3. Methyl levulinate (**ML**): a building block for numerous biobased applications, in e.g. cosmetics, food preservatives and fuels. ML can also be used as a solvent, in fragrances, as a plasticiser or as a natural herbicide. The Joint Venture intends to sell the ML produced at the Reference Plant to third parties.

Performance

The YXY Technology's 100% biobased lead application, PEF, is a polymer with superior performance properties compared to today's widely used packaging plastics, such as PET.[31] First of all, PEF has superior barrier properties (i.e. the ability to withstand permeating of gases, such as oxygen or carbon dioxide (CO_2) through the bottle wall) resulting in longer-lasting carbonated drinks and extended shelf life of the packaged products, compared to PET, and making certain coatings to enhance the barrier performance of PET redundant. Secondly, PEF is 100% recyclable and therewith outperforms coated/multilayer plastics which in many cases cannot be recycled. Thirdly, in terms of thermal properties, PEF is considered more attractive than PET due to its superior ability to withstand heat (expressed in the glass transition temperature, **Tg**) and its ability to be processed at lower temperatures (expressed in the melting temperature, **Tm**):

Superior barrier properties:

- PEF oxygen barrier is 10 times better than PET;
- PEF carbon dioxide barrier is 4 times better than PET;
- PEF water barrier is 2 times better than PET.

More attractive thermal properties:

- The Tg of PEF is 86°C compared to the Tg of PET of 74°C;
- The Tm of PEF is 235°C compared to the Tm of PET of 265°C.

PEF has enhanced mechanical stiffness and allows for increasing shaping possibilities. Furthermore, PEF can offer a significant reduced carbon footprint compared to PET at industrial scale. The Copernicus Institute of Sustainable Development at the University of Utrecht, the Netherlands, an independent organisation specialised in making Life-Cycle-Analysis, performed in 2012 a cradle-to-grave assessment of non-renewable energy usage and carbon emissions. The results of this assessment demonstrated that the production of PEF could reduce carbon emissions and non-renewable energy use by 50-70% compared to PET.[32] The Joint Venture will perform a new Life-Cycle-Analysis taking into account the latest set up of the YXY Technology's PEF production process.

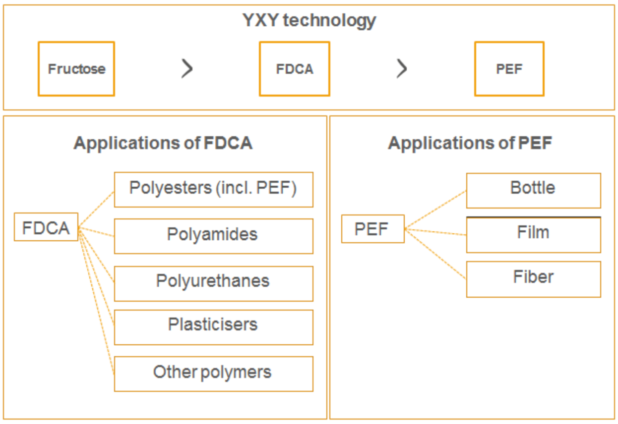
PEF is 100% recyclable and therewith outperforms coated/multilayer plastics which in many cases are not recycled due to prohibited recycling costs. The Group is closely collaborating with its partners and the recycling

[30] Based on the current projections of the Company for a 50 kta FDCA plant.
[31] Based on research by the Company and by PTI Research, commissioned by the Group.
[32] Eerhart, Faaij & Patel: *Replacing fossil-based PET with biobased PEF; process analysis, energy and GHG balance*, Energy & Environmental Science - Issue 4, 2012.

community**,** including the European PET Bottle Platform (**EPBP**), to find the optimum end-of-life solutions for PEF. Technical data demonstrates PEF to PEF recycling is feasible. Experiments to determine the compatibility of PEF with PET recycling show that adding approximately 5% of PEF to the recycled PET stream under the current protocols has no material impact on mechanical and physical properties of recycled PET. Should the portion of PEF in the existing PET recycling stream exceed 5% of the total amount, the Group expects that this will be sufficient to qualify for a separate PEF recycling stream.

Market potential

The YXY Technology and its basic applications are shown in the following graph.



FDCA can be used for a broad range of applications, such as polyamides and polyurethanes, used for engineering plastics, adhesives and coatings.

PEF, the lead product based on FDCA , can be used for a wide range of applications, from packaging of soft drinks, water, alcoholic beverages, fruit juices, food and non-food products (such as personal care and household products) to film and fibre applications.

Film is a packaging solution consisting of multiple layers of thin plastics. Certain of these layers contain specific barrier materials, such as aluminium or nylon, to deliver the required performance. Film can be used in a large variety of applications, ranging from food packaging to electronic sealing. The larger variety of applications creates many (smaller) market opportunities at various price points, resulting in a market which is fragmented.

PEF fibres can be used for PEF textile applications such as clothing, carpets, sports apparel, car tires, etc.

The initial commercial focus of PEF will be on the packaging industry, where the performance of PEF justifies the initial higher price of the material as a substitute for aluminium, glass, multi-layer packaging and existing film applications. In particular, the superior properties allow PEF to address the following major trends observed in this industry:

- sourcing of sustainable and green label products;
- shift in portioning: smaller bottles/packaging possible because of the improved properties;
- increase in demand of prepared fresh food: improved oxygen barriers allow for better conservation of fresh food; and
- brand building through packaging: more shapes/sizes of packaging possible because of enhanced properties.

The markets for FDCA and PEF represent an aggregate annual turnover of over US$200 billion. Reference is made to Chapter 12 “Industry”.

Partnerships

An integral part of Avantium’s strategy and commercialisation roadmap has been the close involvement of strong partners throughout the entire value chain. Over the years, Avantium signed several collaboration agreements with renowned global partners. The most important collaboration agreements relating to the YXY Technology, which have been transferred to the Joint Venture, are described below.

Avantium entered into joint development agreements with The Coca-Cola Company (bottles for carbonated softdrinks, juice and ready-to-drink tea, coffee and energy drinks) and Danone (still and sparkling water bottles) in 2011 and with ALPLA (bottles for food, personal care, home care and alcoholic beverages) in 2013. With these partnerships, Avantium has (i) demonstrated food contact safety of PEF, (ii) evaluated recyclability of PEF and (iii) the technical validation of the PEF bottles production and testing in major applications. Building on these collaborations, the Joint Venture intends to enter into next step commercial agreements for the supply of PEF.

In addition, the following relationships of Avantium have been transferred to the Joint Venture:

In 2014, Avantium signed material transfer agreements with industrial partners to assess the market potential of PEF films in Japan. Subsequently, in 2016 Avantium signed a framework agreement with Mitsui to commercialise FDCA and PEF in film and bottle applications in the Asian region together with Mitsui affiliates and other industrial parties. This agreement grants Mitsui a right to evaluate geographical market areas, products to be manufactured, manufacturers for such products and customers for such products. The Joint Venture will furthermore supply certain volumes of FDCA and/or PEF and support in Mitsui's commercialisation efforts. Mitsui has a strategy in pursuit of future bio-refinery structures, combining its strength in feedstock, project management, chemicals and end-markets. The partnership on FDCA and PEF fits well into this strategy.

In 2015, Avantium and Toyobo announced an agreement regarding the collaboration on PEF polymerisation and PEF films, evaluating the polymerisation and film production of PEF in Toyobo lab scale and pilot assets. Toyobo has evaluated Avantium's PEF resin for the production of thin films applied in food packaging, electronics and medical packaging. Toyobo and the Joint Venture will furthermore be collaborating with the objective of scaling up the PEF polymerisation process to Toyobo's commercial batch and continuous polymerisation assets. It is Toyobo's intention to scale up the PEF film development and have roll stock samples available for testing by packaging converters as of 2017.

In 2015, Toyobo, Mitsui and YXY Technologies B.V. entered into a three party market development agreement for the development by Toyobo of PEF thin films, and the market development for such films by Mitsui. Based on the outcome of a market development study, Mitsui, Toyobo and the Joint Venture expect to enter into agreements for the commercial supply of PEF resin for application in PEF thin films. Subsequently, in 2016 Avantium signed a restated framework agreement with Mitsui to commercialise FDCA and PEF in film and bottle applications in the Asian region together with Mitsui affiliates and other industrial parties.

Avantium also collaborated with several industrial partners in a range of FDCA and PEF applications:

- to explore with WIFAG Polytype Group the potential of PEF thermoforming to make high value food packaging applications;
- to develop and evaluate PEF fibres in large scale applications, such as industrial fabric and carpets, car tires and textile applications for consumers (shoes, sports apparel etc.);
- to develop and test FDCA based high performance fibres; and
- to develop and test FDCA based chemicals and polymers for a broad range of applications, including plasticisers, polyesters, polyamides, polyurethanes and co-polyesters for engineering plastics, adhesives and coatings.

These collaboration agreements have been transferred to the Joint Venture.

Status and next steps

Pilot Plant

In December 2011, the Group officially opened the Pilot Plant. The Pilot Plant is currently running 24 hours per day, seven days per week, all year round. By using the Pilot Plant, the Group has made substantial progress in process development and optimisation of the YXY Technology, in improving the yields and process economics and in taking a significant lead over competitors. The purpose of the Pilot Plant has been to demonstrate the scalability of the YXY Technology and to produce sufficient volumes of FDCA and PEF for application development. Since the old pilot plant building had insufficient space to facilitate all assets, and did not allow for any further expansion, such as the addition of purification, the Pilot Plant has recently been moved to its current location at the Chemelot campus in Geleen.

Joint Venture with BASF

On 30 November 2016, Avantium established the Joint Venture with BASF (with economic effect as of 1 July 2016) to commercialise the YXY Technology and build the first commercial scale plant to produce FDCA and sell FDCA and PEF (the Reference Plant). The Joint Venture also intends to commercialise the YXY Technology by licensing it to BASF and others to enable global industrial scale production of PEF as from 2021.

The initial contribution to the Joint Venture by the Group comprises its IP in relation to the YXY Technology, the Pilot Plant, lab equipment relating to the YXY Technology, collaboration agreements and employment contracts relating to the YXY Technology, whilst BASF contributes cash. In addition, the Group will transfer a European subsidy application to the Joint Venture. The application entails a Horizon 2020 Bio Based Industries flagship subsidy of €25 million to establish with a consortium of eleven partners a first-of-a-kind, industrial scale, cost-effective FDCA reference plant. In December 2016, the Group received from the European Commission a favourable evaluation report and the exclusive invitation to prepare the documentation. Currently the Group is the subsidy coordinator but is in the process of transferring this role to the Joint Venture. The consortium encompasses the full value chain including feedstock suppliers, technology providers, application developers and brand owners. The grant of the subsidy is only subject to finalisation of a final grant agreement which the

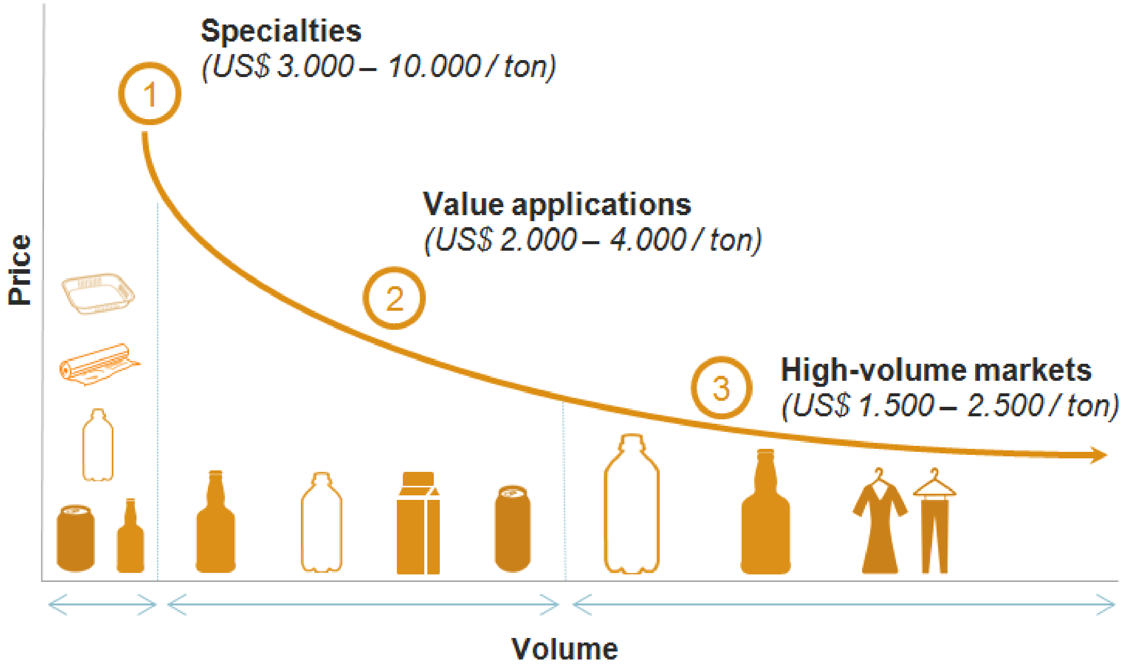
European Commission scheduled for 8 May 2017. Subsequently, the European Commission will publish the subsidy information including the consortium partners.

Additional financing needed by the Joint Venture for the construction of the Reference Plant will be sought from third party-financing, shareholder loans and/or additional capital contributions from the Group and BASF, to be determined according to inter *alia* the Joint Venture's capital needs. It is intended that the construction of the Reference Plant will be funded by up to 50% through debt (third party debt or shareholder loans). The Joint Venture could deviate from this debt ratio, for example if another mix of capital would benefit the business. A deviation is subject to unanimous shareholder approval. The Joint Venture aims to be financially self-sufficient as from the moment it is able to successfully sell the FDCA produced by the Reference Plant to third parties.

Reference Plant
The Joint Venture intends to build the Reference Plant for the commercial production of FDCA up to 50,000 ton scale. The Joint Venture Agreement provides for certain decision moments, including a decision on plant capacity based on, amongst others, market assessment, customer feedback, process cost assessment and technology scaling aspects. The Joint Venture aims for a final investment decision (FID) in the fourth quarter of 2018 to construct the Reference Plant and to approve the associated capital expenditures. A positive FID will depend on the viability of the business case of the Joint Venture, based on a range of factors including basic engineering and technical feasibility, supply chain agreements and a final financing plan ensuring sufficient cash flow for the duration of the Joint Venture. The construction of the Reference Plant is expected to take over 24 months and the Reference Plant is expected to be operational in 2021. It is envisaged that polymerisation of FDCA to PEF (step 4 in the YXY Technology) will be outsourced to one or more third parties either on a toll manufacturing basis or through a strategic partnership.

Commercialisation
The Joint Venture is in particular seeking to develop market demand for FDCA and PEF. In first instance, the Joint Venture intends to focus on markets for high-value PEF applications and specialties in the food and beverages packaging industry, leveraging (i) the unique properties of PEF and (ii) the sustainability profile of PEF.

The Group believes that PEF market acceptance will follow a 'value curve': introduction will start with various PEF grades to address those applications, brands, countries and channels where these PEF grades compete on performance and where the value of the PEF grade properties is highest (i.e. relatively high value and low volume) and over time, as production costs come down and scale goes up, it will expand to lower value segments. A lower cost price of PEF will enable it to compete in high-volume markets. This 'value curve' can be illustrated as follows:



The above graph illustrates the price level of applications the Group has identified where PEF grades can compete on performance. See for more information also the table in Chapter 12 "Industry", section 12.3 "Packaging" under 12.3.2 "Packaging formats" sub "Film".

The Joint Venture intends to commercialise the YXY Technology by selling FDCA and PEF from the Reference Plant and selling Licences of the YXY Technology to third parties to produce and use FDCA and/or PEF.

Licence strategy

For illustrative purposes only, certain licensing characteristics are described. A buyer of a Licence (the licensee) could receive non-exclusive rights to the YXY Technology IP to construct a plant and/or produce and sell products, and will receive a process design package and related (limited) performance guarantees. In return for the Licence, the licensee will pay an upfront royalty fee with payments typically linked to milestones, for example:

- 15% at signing of the licence agreement;
- 35% at start of plant construction (approximately 1 year after signing); and
- 50% after completion of the site, acceptance testing and confirmation of process guarantees (construction takes approximately 2 years).

An alternative could be a running royalty, this is a fee per produced or sold tons of material, to be paid annually, typically with a maximum of 15 years or a maximum cumulative production volume. The upfront royalty fee is a discounted running royalty fee. Typically both licensor and licensee prefer an upfront royalty payment: the licensor (i.e. the Joint Venture) as revenues and cash receipts are secured, the licensee because this avoids that it must open its books yearly to allow calculation of the running royalties. In addition, the licensee may have the upfront licence fee payment financed together with the plant investment.

A royalty fee can be presented as a percentage of plant capital expenditures or of revenue and is always related to the licensee's forecasted value that can be generated as a result of the licence. The Company estimates that the capital expenditures to be made by a third party for the construction of an industrial scale plant (400 kta) for the production of FDCA ranges between approximately €0.8 and €1.2 billion. Key elements in determining the fee are plant capacity and product margin, but ultimately is a result of negotiations between parties and will depend on the competitive landscape. A rule of thumb suggests that 25%[33] of the expected value for the licensee is awarded to the licensor. The duration of a licence is typically unlimited and linked to the specific plant for which the licence is granted but is also a result of negotiations of the price of the fee.

A licensor could offer different technology generations, however, Avantium believes that the licensee will always demand the latest (i.e. lowest cost price) technology to ensure competitive advantage over other licensees. After the plant has become operational, there is normally a period of several years during which the licensor and the licensee are bound to share new developments and improvements under certain terms and conditions. Thereafter, the licensor can offer technology improvements as 'add-ons' for additional fees or under a service agreement.

Typically, a licensor can demand that 'major improvements' are shared during an annual technology review meeting between licensor and licensee and are incorporated in next generation licences and 'add-ons'. However, licensees have an incentive to keep achieved improvements for themselves and the exact terms are linked to the licence amount. A licence agreement should include amongst others a definition of 'major improvements', whether improvements are patented or kept as a trade secret, ownership of IP and access for licensee or licensor, the period for such 'major improvements' and the exclusivity period for a licensee before the licensor can offer improvements to other licensees.

The Joint Venture aims to ensure that the YXY Technology will offer the best performance in terms of product performance and economics, which will enable the Joint Venture to maintain its technology leadership and successfully market FCDA and PEF and sell Licences. The Joint Venture will therefore continue to invest in improving the YXY Technology and developing applications for FDCA and PEF.

Competition

Based on publicly available information (such as press releases and patent applications from competitors), the Company believes that the Joint Venture is the first to move to commercial scale FDCA and PEF production, under full IP protection throughout the entire value chain from raw material to end applications.

In respect of the development processes to produce FDCA, the Joint Venture faces competition from chemical companies and producers of biobased products and its intermediates. Avantium believes that these companies are only active in certain steps of the value chain from fructose through PEF and are in less advanced stages of development. Such companies include:

- Sugar dehydration to MMF or HMF: Archer Daniels Midland (ADM, United States), AVA BioChem (Switzerland), Micromidas (United States), xF Technologies (United States) and partnership ADM/Dupont (United States);
- Oxidation of HMF or MMF to FDCA: ADM (United States), Corbion (the Netherlands), Dupont (United States), Novozymes (Denmark), Eastman (United States) and collaboration ADM/Dupont (United States); and
- Polymerisation of FDCA to PEF: Canon (Japan), and Uhde (Germany).

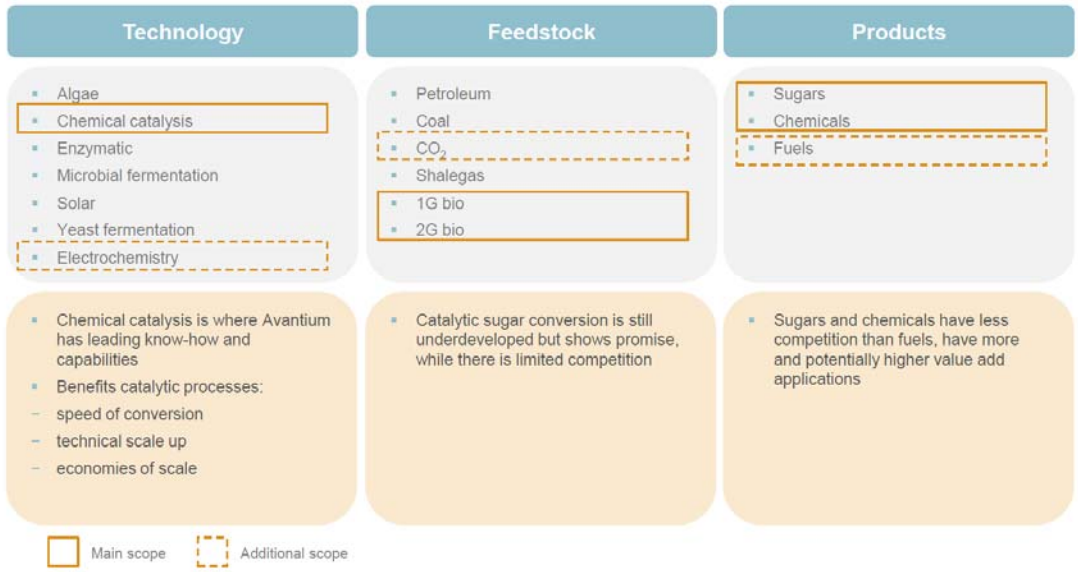
Previously, BASF was also a competitor in the sugar dehydration process to produce HMF. The Joint Venture has the right of first refusal to acquire the exclusive licence for this technology.

[33] Www.bu.edu/otd/files/2009/11/goldscheider-25-percent-rule.pdf.

Currently, no barriers to the Joint Venture's freedom to operate the Reference Plant have been identified (see section 11.5 "Intellectual property").

11.4.2 Renewable Chemistries

Renewable Chemistries is Avantium's development division with a portfolio of new development projects in the area of renewable and sustainable chemistry. It operates on the basis of the Group's extensive experience and expertise in catalysis R&D, processing and conversion of biomass feedstock, chemical process design and pilot scale operations. The focus is on the conversion of 1G or 2G biomass to chemical building blocks and plastic materials.

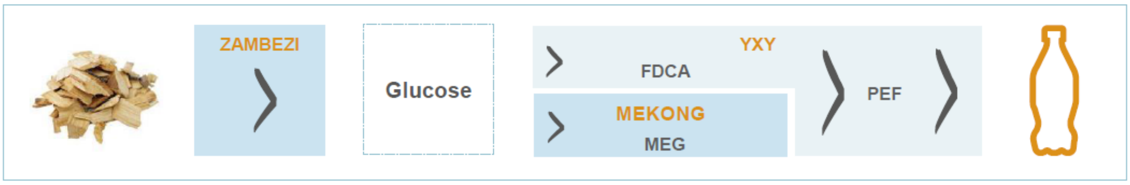


Graph: A focused approach to developing Renewable Chemistries

Through portfolio management and stage-gate approach, the Group intends to bring the Renewable Chemistries' projects from ideation to proof-of-principle to a fully developed business case that forms the basis for partnering and attracting funding. At each stage, the Group assesses which approach best suits each project, e.g. continuing on a stand-alone basis, partnering or selling the technology. The YXY Technology is regarded as an excellent example of how the Group can create value potential through innovation, entrepreneurial and result oriented project management.

Over the past 15 years, by working for and with numerous global leaders in catalytic process development, the multi-disciplinary Renewable Chemistries team has developed unique skills to assess early stage opportunities with respect to future deployment potential, technology scale-up potential and to assess very early on the potential economics of new products and process technologies.

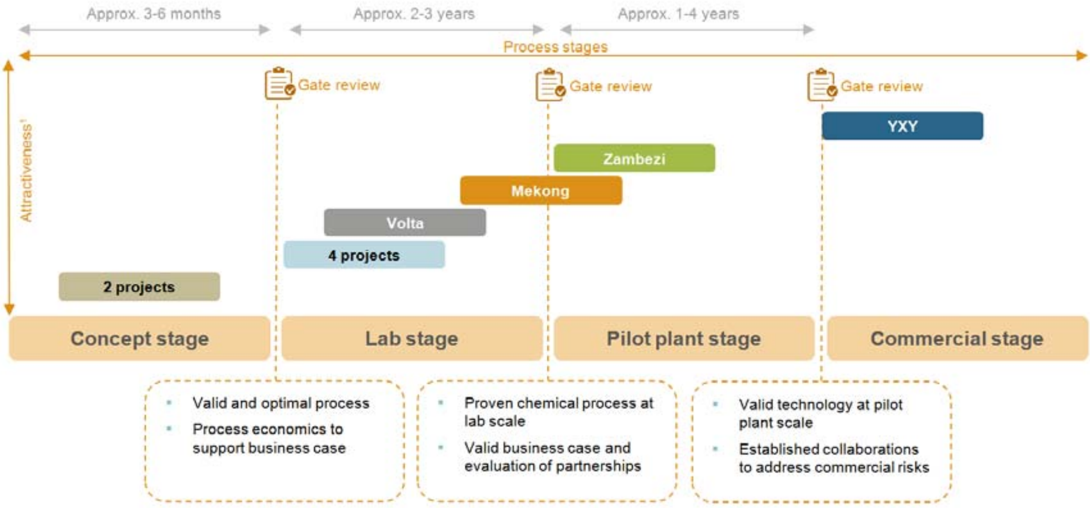
In recent years, Renewable Chemistries has initiated multiple projects, of which Project Zambezi has reached pilot plant stage, Project Mekong is entering pilot plant stage and Project Volta has reached lab stage. Project Mekong and Project Zambezi are complementary to (but not dependent on) the YXY Technology (owned by the Joint Venture). Project Zambezi aims to develop a cost-competitive production process for high-purity glucose from non-food biomass which can be converted into various biobased chemicals such as FDCA, Lactic acid and antibiotics, whilst Project Mekong focuses on the process of making biobased MEG, FDCA and MEG being the two building blocks for producing PEF. This can be illustrated as follows:



Project Volta comprises the direct use of electricity in chemical processes and is in lab stage. The Company is working on electrochemistry including conversion of CO_2 to chemical building blocks and other electrochemical processes and technologies. The Group believes its expertise in chemical catalysis can contribute to this field.

Development stages

The graph below shows the development stages of the current 'Renewable Chemistries' projects (and of the YXY Technology):



In the concept stage, scientists and engineers in the Renewable Chemistries team evaluate novel ideas by combining their extensive knowledge of the chemical scientific and patent literature, process engineering and process economics and by defining a set of technical and economic targets. In focused ideation sessions, chemistries and novel process concepts of the key ideas are further explored. A steering committee chaired by Avantium's CTO reviews, selects and prioritises projects based on criteria including probability of technical and commercial success, strategic fit and potential profitability. On average, a project is in concept stage for approximately 3-6 months.

In the lab stage, experiments are designed and executed in the Group's laboratory, often drawing on Avantium's technology development expertise in designing and building or modifying the necessary equipment. This usually involves a small team of specialists and limited capital expenditures, where possible supported by a subsidy. Typically, an external 'conceptual process design study' is executed, to evaluate, validate and optimise the process, guide the process development targets, and to establish process economics to support the business case. Such a conceptual process design study involves process simulation to deliver heat and mass balances, consumption numbers (i.e. feedstock, utilities) and a first indication of operational and capital expenditures. On average, a project is in lab stage for approximately 2-3 years.

Based on an attractive and profitable business case including assessments of the market opportunity, potential partnerships, IP and economics, a project can enter the pilot plant stage. After Supervisory Board approval the Group can start constructing and investing in the pilot plant and work with partners to co-develop the technology. The purpose of this stage is to prove the chemical process at pilot plant scale and to produce larger quantities of chemical building blocks and materials. In this stage also the business case is further validated and various partnership and value creation models are evaluated.

The duration of the pilot plant stage is 1-4 years, depending on the complexity of the chemistry and the number of conversion steps. A project may enter into the commercial stage, subject to Supervisory Board approval, once the business case has been built, the plant is producing, the technology has been validated at pilot plant scale, IP protection has been secured and collaborations to address commercial risks have been established.

Project Zambezi

Project Zambezi comprises the development of a cost-competitive production process for high-purity glucose from non-food biomass (also called 2G feedstock). High-purity glucose can be converted into various biobased chemicals such as FDCA, lactic acid and antibiotics. The Zambezi Project has moved into pilot plant stage. The Group plans to start constructing the pilot plant directly following completion of the Offering, if sufficient funds are raised, and expects the pilot plant to be operational in the second quarter of 2018. The pilot plant may generate revenues from providing material or entering into partnerships onwards. Provided that the pilot plant stage is successful, the Group intends to design and construct a first commercial plant in 2019-2020. The business model will be established based on the most attractive value creating option.

<u>*Opportunity*</u>

The main building block that will be needed for the transition to a biobased economy is glucose. Glucose represented a US$16 billion market in 2009 for fermentation derived fine chemicals (from starch and sugar).[34] Today, glucose is only available at commercial quantities from first generation (or 1G) corn or wheat starch.

The main advantages of using 2G feedstock, as opposed to using 1G feedstock, are that 2G feedstock is available in large quantities in the form of waste (e.g. forestry, agricultural, paper), beet pulp and bagasse (the fibrous matter that remains after e.g. sugarcane stalks are crushed to extract their juice) and the use of 2G feedstock can overcome concerns about competition with land use for food.

Technology
The most abundant global source of glucose is cellulose. Cellulose, lignin and hemicellulose form the components of lignocellulosic biomass. Just like starch, cellulose is a polymer that consists of glucose only. The separation (hydrolysis) of cellulose has been topic of research for over 100 years. Many companies are currently active in the conversion of lignocellulosic biomass, predominantly focusing on producing 2G ethanol. Pure glucose is not required for this and as such brute force high temperature pre-treatment (e.g. steam explosion) followed by enzymatic hydrolysis is often used. During the last five years and stimulated by The Coca-Cola Company and Danone, Avantium tested many 2G glucose samples from a wide variety of technologies.

Based on these tests, Avantium concluded *inter alia* that most of the technologies currently under development will not deliver the high quality glucose needed for many biobased chemicals processes in a cost-competitive way and only low temperature processes with concentrated acid are sufficiently selective to produce high purity sugars with high yield. After a rigorous techno-economic as well as an IP analysis, Avantium concluded that a Bergius process – a proven technology developed initially by Bergius in Germany starting in 1916 – had technically by far the most potential based on historic purity (>95%) and high yield of glucose (>95% glucose yield with respect to cellulose). However, although commercial plants based on the Bergius technology have been operational, glucose has never been produced by using this process at competitive prices (earlier attempts always stranded due to very high energy cost for massive water evaporation during acid recycling) compared to other ways of producing glucose.

Avantium has been able with its Zambezi technology to overcome this drawback by keeping the well proven hydrolysis sections of the old process, but significantly improving the process by developing proprietary acid separation technology. This reduces the water evaporation and related utility cost with more than 70%, resulting in a cost-competitive process.

The old Bergius process has the following features, making it technologically a best in class process for the production of 2G glucose and the side streams hemicellulosic sugars, wood extractives and clean dry lignin:

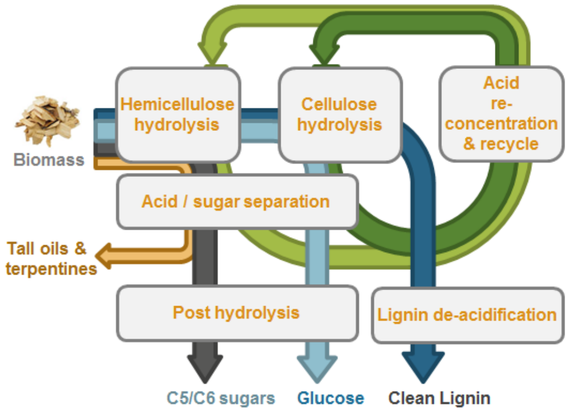
- feedstock flexible: woodchips, corn stover, bagasse, sugar beet residue and others;
- unlike any other 2G technology, the biomass is static in the Zambezi process, minimising problems with solids and slurries moving through the process and eliminating problems with pumps and abrasion/wear;
- no pre-treatment of biomass is required: wood chips can be used directly in the process. Other biomass (e.g. stover, bagasse) may need an extrusion step to obtain pellets that can be loaded into the hydrolysis reactors;
- by using two different acid concentrations, hemicellulose and cellulose can be hydrolysed separately, allowing the production of a separated mixed sugar product from hemicellulose and a pure glucose product from cellulose;
- the high purity 2G glucose produced with the Zambezi technology is identical to 1G glucose from starch; and
- because of the low temperature, the process is very selective: at this low temperature sugars are stable in the concentrated acid. Because the sugars are stable, full conversion at high selectivity (no sugar degradation) is possible. High selectivity at full conversion means very high yields.

In addition to the old technology, Avantium developed proprietary technology to replace some of the unit operations, as a result of which the technology developed by Avantium is not only technologically superior to other 2G technologies but also from an economic point of view:

- Avantium developed proprietary technology to efficiently separate and recycle the acid from the sugar. In the Avantium technology the amount of water used is reduced by more than 70%. In the acid recycle this means significantly reduced water distillation. Softwood typically contains 5wt%[35] of tall oils and turpentine which have quite high value. Because of the modifications made by Avantium to the old process, separation of these wood extractives is now feasible; and
- Avantium has also developed proprietary technology for the separation and recycling of the acid from the residual lignin, giving a clean lignin product suitable for many different applications such as carbon black, carbon fibres, catalyst support, additive in cement or asphalt and as fall-back energy generation.

The process outline of Project Zambezi can be illustrated as follows:

[34] Www.ieabioenergy.com/wp-content/uploads/2013/10/Task-42-Biobased-Chemicals-value-added-products-from-biorefineries.pdf.
[35] I.e. percentage by weight.



Status and next steps
The Zambezi Project has moved into pilot plant stage and the Group decided to build the pilot plant for Project Zambezi, subject to raising sufficient funds in the Offering and further exploration of the commercial business case.

The pilot plant will in first instance run on woodchips because of their broad availability, established value chain, stable prices and relative ease of handling. In the pilot plant stage, the Group will validate the improvements to the modified Bergius process at scale, further fine-tune the processes involved and investigate the use of other 2G feedstock.

As per 1 September 2016 the Group participates in an EU subsidy project named Bioforever (BIO-based products from FORestry via Economically Viable European Routes). This subsidy will support Avantium in Zambezi's market development as Avantium will provide (amongst others) Zambezi glucose and co-products produced by the Zambezi technology (e.g. lignin) to subsidy partners including DSM (The Netherlands) and Borregaard (Norway) for testing. The duration of the project is 36 months and 70% of Avantium's eligible costs (such as personnel costs, direct costs of subcontracting and the depreciation costs of equipment, infrastructure or other assets) are subsidised with a maximum of €2.1 million (€1.4 million of subsidy).

In December 2016, the Group signed a non-binding memorandum of understanding with AKZO Nobel Industrial Chemicals B.V. (AKZO Nobel), RWE Generation NL B.V. (RWE) and Staatsbosbeheer to explore a flagship wood-to-chemicals biorefinery at the chemical cluster in Delfzijl, the Netherlands. Each partner brings its core strength to the project; from feedstock, throughout the supply chain to end-products. The main feedstock of the plant shall be locally sourced forestry waste coordinated by Staatsbosbeheer. The planned biorefinery builds on the strong synergies of the infrastructure, utilities and expertise of the AKZO Nobel site. RWE will provide the expertise and demand for lignin deployment for renewable energy generation. The partnership expects that the Zambezi technology, together with the geographical, technical and logistical benefits of the Delfzijl area, will enable the cost-competitive production of cellulosic sugars that will help accelerate the roll out of the biobased economy.

Pilot plant design is expected to be completed in the first quarter of 2017. If the decision on building the pilot plant is positive, the Group plans to start constructing the pilot plant in the second quarter of 2017 and expects the pilot plant to be operational in the second quarter of 2018. The pilot plant may generate revenues from providing material or entering into partnerships onwards. Provided that the pilot plant stage is successful, the Group intends to design and construct a first commercial plant in 2019-2020. The business model will be established based on the most attractive value creating option.

The Group will continue to work with multiple potential partners regarding possible feedstock supply, purchase agreements, product off-take agreements, licensing or co-location and aims to collaborate on the further development of the Zambezi technology. Next to third party interest to collaborate on woodchips (as a base case), wheat straw, corn stover, bagasse and beet pulp feedstock, there is also interest to evaluate next to pure glucose the co-products that will be produced in the process, such mixed C5/C6 sugars from hemicellulose, tall oils (from softwood) and lignin.

The Group believes that the Zambezi technology allows for a production of glucose at an industrial scale at prices similar to historical 1G glucose prices, making it competitive with 1G glucose.

Competition
Avantium believes that the Zambezi technology (potentially) competes with technologies of the following companies:
- 2G ethanol companies that produce bio-ethanol, such as Abengoa (Spain), POET/DSM (USA), Iogen (Canada) and Dupont (USA);

- Companies that produce sugars from 2G feedstock, but currently do not produce pure glucose, such as Beta Renewables (Italy), Renmatix (USA), Borregaard (Norway), Comet (Canada) and Sweetwater (USA);
- Companies that produce glucose using organosolve processes - such as Lignol (Canada), Chempolis (Finland) and CIMV (France), which will be focusing on isolating cellulose but will not be cost-competitive for separation of cellulose into glucose; and
- Companies that like Avantium use a process based on the Bergius process to produce high yield, high quality glucose. Today only Stora Enso (which acquired Virdia in 2014[36]) is active in this field. Avantium evaluated the amine extraction technology that Stora Enso is developing for acid separation and recycle, based on publicly available information (such as patents), and has concluded that this technology is not cost-competitive with the Avantium technology, because extraction is by definition incomplete, the amines are relatively expensive and losses in the process cannot be avoided.

Project Mekong

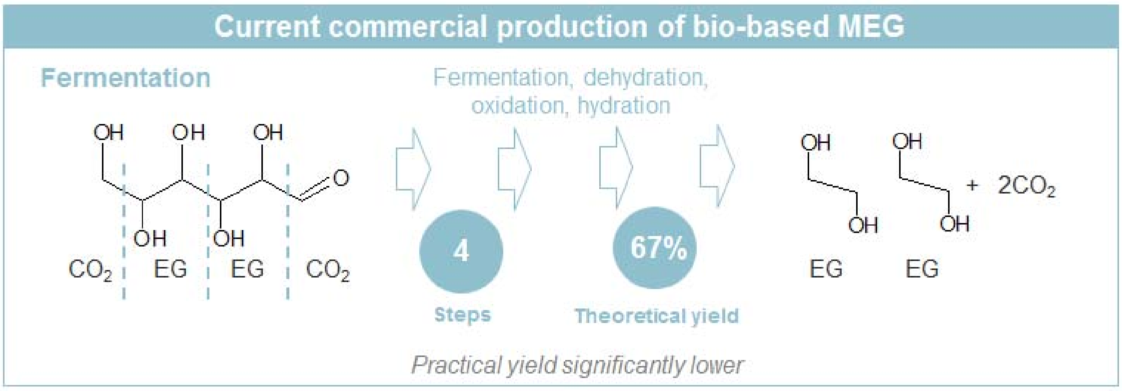
Project Mekong focuses on the process of making MEG from glucose in a single-step, a high atom efficiency process which is competitive with petroleum based MEG.

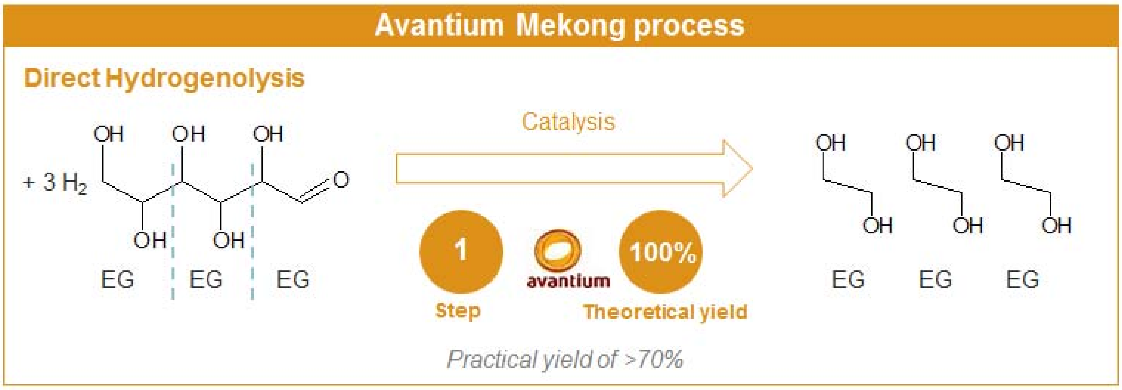
Opportunity[37]
PET is a ubiquitous plastic which is made partly from MEG. There is a tremendous drive from forward looking brand owners and packaging companies to source MEG from renewable sources rather than from fossil feedstock. MEG is mainly used for the production of polyester fibre and bottles. Today's market for MEG is predominantly fossil-based and represents an annual turnover of over US$24 billion. Approximately 1% of the MEG production is currently biobased as biobased MEG is 30 to 35% more expensive than MEG derived from fossil feedstock. [38]

Project Mekong aims to produce biobased MEG, which is chemically identical to fossil-based MEG (it is a drop-in product[39]), in a one step process. With Avantium's Mekong technology, biobased MEG may offer a truly cost-competitive alternative that may remove the current growth barrier for a 100% biobased drop-in product.

Technology
The current commercially used process of producing MEG from glucose ($C_6H_{12}O_6$) takes four intermediate steps, resulting in a maximum theoretical yield (amount of MEG as a percentage of glucose used to produce the MEG) of 67%.[40] Therefore, these production processes for biobased MEG are too expensive, hampering its widespread use when compared to the cheaper petroleum and shale gas based alternatives. Avantium identified a selective catalyst to split the C6 in glucose in three C2 fragments for a single-step process:

36 www.biofuelsdigest.com/bdigest/2014/06/23/stora-enso-acquires-virdia-in-up-to-62m-deal/.
37 Www.coca-colacompany.com/stories/plantbottle-frequently-asked-questions
Www.rvo.nl/sites/default/files/2014/03/Market%20Opportunities_Biobased_Materials_Final%20Report nova-Institute_March%202014_NL%20Enterprise%20Agency.pdf (page 14).
38 Tecnon Orbichem, May 2016; estimated at a reference price of $1,000 per ton.
39 See Chapter 12 "Industry", section 12.6.1 "Industry wide strategies" for further information on drop-in products.
40 Www.en.wikipedia.org/wiki/Ethanol on fermentation (glucose (C6) → 2 ethanol (2 x C2) + 2 CO_2 (2 x C1); thus of all 4 steps have maximum yield, the overall carbon yield is 67%.





By this single-step process a 100% MEG yield is theoretically possible but practically a >70% MEG yield can be achieved. This is better than the maximum possible yield that can be obtained in the current four-step process to biobased MEG.

In addition, the Mekong process is flexible in the use of feedstock, meaning that production of biobased MEG according to the Mekong process could be based on multiple sources of 2G feedstock.

The Group has achieved very promising experimental results. Based on the current process performance and historical starch and steam prices, the Group believes that biobased MEG can be produced at attractive costs compared to MEG derived from fossil feedstock, making this new process development a commercially interesting proposition.

Status and next steps
Avantium is still testing the catalyst longevity, efficiency, recyclability and suitability for continuous operation and is currently scaling up the process initially in the United States on a contract research basis (fee-for-service). In addition, the downstream MEG purification will be evaluated in third party assets (i.e. execution in third party facilities commissioned by and under supervision of Avantium).

Project Mekong is expected to move into pilot plant stage in Q2 2017. Avantium anticipates that the Group will make the investment decision for the pilot plant by the beginning of 2018, after which construction will take about one year. If testing on pilot plant scale is successful, the Group expects to make a final decision regarding a possible commercial scale plant by the beginning of 2021. Avantium plans to enter into one or more partnerships before the construction and operations of the commercial scale plant.

Competition
Biobased MEG entered the market about five years ago. The Coca-Cola Company and Danone use biobased MEG to make partially biobased PET and launched their Plantbottle™ and Bouteille Végétale, respectively. The process for this biobased MEG uses the four steps from cane sugar as described above. Current producers are India Glycols (India), Greencol Taiwan Corporation (Taiwan) and Global Biochem (China). Consequently the material is predominantly sold at a significant premium to Naphtha based MEG. Avantium believes that the competitiveness of this process depends on the price of petroleum-based Naphtha-ethylene.

The Company believes that any future biobased MEG produced according to the Mekong technology would enable the growth of biobased MEG which is currently hampered by its unattractive economics.

Project Volta

Project Volta comprises the direct use of electricity in chemical processes and is in lab stage. Electrochemistry is known for many years, but so far only with limited applications. The Group is working on electrochemistry including conversion of CO_2 to chemical building blocks and other electrochemical processes and technologies. The Group believes that its expertise in chemical catalysis can contribute to this field.

Opportunity
The Company believes that the use of renewable energy in the conversion and production of chemicals will become of increasing importance. Currently, electricity is mainly used indirectly in chemical processes, for example for heating and pumping. As the cost of renewable electricity is expected to decrease,[41] electrochemistry is a promising opportunity to use electricity directly in the chemical industry for oxidation and reduction reactions. The direct use of electricity in chemical conversions is predicted to have a promising future,[42] since its capacity is not limited by its size or energy density, as is the case for batteries. The electrical efficiency of the process can even be doubled by combining an oxidation and reduction reaction in one reactor instead of two.

The feedstock classes under consideration are typically integrated with renewable resources such as products from a lignocellulosic biorefinery (e.g. sugars and furanics) as well as carbon dioxide. Integrating electrochemistry with other processes also opens opportunities for heat exchange, increasing the overall efficiency even more.

Technology
Since 2013, Avantium has been developing electrochemical reactor technologies to improve conversions. Its key targets are:
- to improve the productivity;
- to make the electrochemical processes competitive with conventional technologies; and
- to identify situations where special selectivity aspects of electrochemistry deliver unique solutions such as reactions where the selectivity can be improved, the number of process steps can be reduced or the amount of waste can be diminished.

The Group is investigating electrochemical processes and technologies that work at elevated temperatures and pressures. In addition, in December 2016 the Group acquired the assets (IP, know-how and hardware) from Liquid Light, which developed a process to convert CO_2 in chemicals based on electrochemistry, with high efficiencies delivering chemistries with the added benefit of carbon capture and energy storage solutions. Prior to the acquisition, Liquid Light was preparing to pilot their process. The purchase of their assets significantly accelerates the Group's investigation and demonstration of electrochemical processes on kilogram scale. Moreover, the extensive patent portfolio of Liquid Light brings Avantium in the top of the world with respect to patent applications on electrochemical carbon dioxide reduction (see table below).

Competition
Most of the research in this area is performed on water splitting, to produce hydrogen and oxygen. The overall efficiency is low, since usually only the hydrogen is used, whereas most of the energy is needed to produce the oxygen. BASF, Panasonic and Evonik Industries are active in the area of electrochemistry. The top 5 companies working on electro-synthesis defined by the number of granted or pending patents are:[43]

Companies/ Universities	**Example of patent**	**Title**	**Number of granted or pending patents**
BASF	WO2011098432A2	Method For Producing 4-Isopropylcyclohexylmethanol	77
Panasonic	US2012024716A1	Device And Method For Reducing Carbon Dioxide	39
Liquid Light (acquisition by Avantium)	US20130180865A1	Reducing Carbon Dioxide To Products	37
Evonik Industries	US2002053521A	Process For The Production Of 2-Hydroxy-4-Methylmercaptobutyric Acid	26
Mitsubishi	US2012302787A1	Process For Producing Perfluorobutanesulfonic Acid Salt	24

Other projects

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41 Www.irena.org/News/Description.aspx?NType=A&mnu=cat&PriMenuID=16&CatID=84&News_ID=1452.
42 Www.marketwired.com/press-release/liquid-light-voted-1-in-biofuels-digest-hot-40-rankings-1966537.htm.
43 Evalueserve April 2016 report for Avantium

Six additional Renewable Chemistries projects are currently at concept stage (2) and lab stage (4). Avantium has several programs, these include programs focusing on side-product valorisation for the YXY Technology and Zambezi technology (humins, methyl levulinate and lignin) and Avantium is looking at new biobased building block opportunities by evaluating polymer products for the plastic materials of the future.

11.4.3 Catalysis

For over 15 years, Catalysis has been providing advanced catalysis R&D services and systems to companies in the chemical, refinery and energy sector. The Group has developed a strong, international customer base including several industry leaders. From its quality control R&D facilities in Amsterdam, the Group helps its customers to innovate faster with a higher probability of success and to achieve faster times-to-market of new catalysts. Avantium has gained considerable experience and expertise from its Catalysis business and has (co-)invented numerous new catalysts and new and improved chemical processes for its customers.

The objective of the Catalysis business is to maintain technological leadership in advanced catalysis R&D, serving a robust customer portfolio and delivering sustainable financial performance. In addition, the Group aims for its Catalysis business to grow long-term services contracts, enable experimentation technologies, leverage synergies between Catalysis and Renewable Chemistries and enable technological and organisational learning. The expertise and experience that the Group has built up through the execution of more than 100 catalytic development projects, as well as the high-tech infrastructure that enables the parallel testing of catalysts and process conditions, provide a unique basis for developing novel catalytic technologies.

The Catalysis business also functions as a learning organisation for the Group, enabling the development of novel proprietary technologies (such as the YXY Technology).

Business model and customers

The services part of the Catalysis business is built around a highly collaborative model that enables its customers to create their own proprietary catalysts and catalytic processes using the Group's equipment and methods. This open collaborative approach has produced effective and novel results. The Catalysis business develops new catalytic processes by merging the knowledge, process and business insights, creative ideas and methodologies of the Group's customers with its own high-throughput screening capabilities and expertise in catalyst synthesis, testing and modelling. The Group's approach does not just generate better catalysts and processes, it also generates them faster, shortening research from years to months.[44]

The Group serves an international blue-chip customer base in the petroleum refinery and chemical industry, of which over 70% are recurring customers. Below is an overview of the Group's key-accounts:

Figure: customer overview Catalysis business

Products and services

Catalysis services offer a broad scope of expertise, from helping the Group's clients to choose the best commercial catalyst and to develop their own process to optimise an existing idea or testing the feasibility of a new concept.

Every time the Group tests new catalysts or catalytic processes, it tailors its methods and instrumentation to meet its client's specific chemistry. Backed by its extensive experience with many types of reactions, the Group is equally capable of tackling new chemical applications. The Group's services program focuses first on validation and feasibility, through referencing or via proof-of-principle tests. With this information, the Group can define the screening program and analyse the vast amount of resulting data to determine the next set of experiments. If the end goal is catalytic process optimisation, then the Group will use the data to model catalyst and process parameters using surface response models and pinpoint the best performance conditions.

[44] Www.avantium.com/press-releases/csiro-speeds-research-energy-footprint-reduction-avantiums-flowrence-technology/.

The Group's integrated approach to developing new catalytic processes enables it to more effectively and efficiently pinpoint the right process for its clients. The Group speeds up the process by combining the catalyst-screening stage with process evaluation. In other words, it evaluates the effects of product separation, (by-)product formation and process economics during (rather than after) the research stage. Subsequently, the Group is able to introduce new catalytic processes into pilot stage more quickly.

Recently, Avantium developed new micro-fluidic technology which further enhances Catalysis testing accuracy and ease of use, thereby allowing customers to improve the discriminatory ability of catalyst tests and more quickly identify promising new catalysts.

The Group's Flowrence technology offers simultaneous testing in identical conditions for fast and reliable results. The made-to-specifications Flowrence system enables the Group's partners to perform heterogeneous catalyst R&D in high-throughput mode without compromising data quality or test relevance. This sophisticated parallel fixed bed reactor technology performs high-quality catalyst testing for important industrial applications. The Flowrence is a more cost efficient and easy to control method of testing catalysts and a faster way to bring the product to market, compared to traditional single-reactor systems.

The Flowrence reactor's unique design enables high reproducibility and the automated collection of gaseous and liquid products.

Figure: pictures of the Flowrence system with sixteen reactors

Flowrence software allows for the control of process conditions and combines catalyst information with analytical and process data. The open software structure means that Flowrence data can easily be integrated with other automated equipment and transferred to a database. Flowrence software also makes it easier to visualise data in data visualising programs, such as MS Excel.

Catalysis business development

The Group aims to gradually increase the revenue in the Catalysis business by further improving the current value proposition to its customers. For example, since 2015, Avantium offers refinery catalyst testing to identify the most suitable commercial catalyst for reforming or hydro processing by refinery companies. The Group also aims to expand the offerings by the Catalysis business to a broader range of R&D stages in both systems and services. For example, the Group has identified the opportunity to expand the application of the Flowrence technology to other R&D stages, including kinetic studies. In line with this strategy, the Group has recently developed a new Flowrence system for early stage catalytic experimentation, whereby a highly flexible unit is needed, but with fewer parallel reactors. Market interest for this system is evidenced by first sales already in 2016.

Furthermore, the Group aims to expand the offerings by the Catalysis business to new catalyst market segments, outside the (petro-)chemical and petroleum refinery catalyst segments, such as environmental and fine chemical catalysts, covering a broad range of R&D stages.

Competition

The Group's Catalysis services business faces competition from companies such as HTE (Germany) and from C-Solutions (Greece). Moreover, it competes with in-house R&D programs of energy and chemicals companies. The Group's Catalysis systems business competes with specialised R&D product providers such as HTE (Germany) and ILS (Germany).

11.5 Intellectual property

The Group considers the protection of IP rights a critical factor for its success. In order to protect its proprietary technologies and products, the Group has developed, and continues to develop and maintain, an extensive IP position. The current patent portfolio protects the core technologies of the Group and the Joint Venture, respectively. The Company considers a patent family granted if it is granted in Europe and in the US. The most important patents are filed in the most relevant countries: Asia (e.g. China, India, Korea, Japan, Indonesia and Thailand), South America (Brazil), Canada, South Africa, Russia and Ukraine. Patents involving feedstock (biomass) conversion are typically filed in countries with abundant biomass. For an overview of all the Group's patents which are of importance to the Group, see Annex "Overview of Patents". This overview contains among others information on the patent families, the patents that are included in each patent family, which patents are published and which are granted, where the patents are granted and the date thereof. The Group also has registered trademarks for amongst others its brand name and certain logos.

YXY Technology

The Group started filing IP on its YXY Technology as early as 2006. To date, the YXY Technology is protected by 63 active patent families, of which sixteen patent families are currently still non-published. More than 25 out of 47 published patents have been granted in Europe and the United States, which include patents on the sugar dehydration and oxidation steps of the YXY Technology process. In addition, the Group filed patent applications on PEF as well as in relation to the use of PEF for bottles, fibre and film. 40 out of the 47 published patent families relating to the YXY Technology have been transferred to the Joint Venture. Patents remaining at the Group concern applications which the Joint Venture will not target (i.e. fuels) or that are of use to the Group within the Renewable Chemistries portfolio. Where required are patents world-wide and royalty free licensed to the Joint Venture with the right to sublicense.

The Joint Venture is continuously monitoring its freedom to operate (i.e. that it does not infringe any third party patent). Currently, no barriers to the Joint Venture's freedom to operate the Reference Plant have been identified. The Joint Venture intends to continue to actively file new patent applications on the YXY Technology, in order to protect its inventions which could contribute to its technology leading position and could contribute to a licensing strategy.

Renewable Chemistries

To date, the Renewable Chemistries business is protected by eleven patent families, of which three relate to Project Zambezi, six to Project Mekong and two to Project Volta.

See Annex "Overview of patents" for more information on the published applications.

In December 2016 the Group acquired assets including an extensive patent portfolio from Liquid Light, including 28 published patent families, bringing Avantium in the top of the world with respect to patent applications on electrochemical carbon dioxide reduction.[45]

Catalysis

The Catalysis technology is protected by a portfolio of nineteen active patent families, of which several have been granted in Europe and/or the United States. Ten of these patent families are licensed to Avantium by Chevron Oronite (see Chapter 20 "General Information", section 20.3 "Material contracts", under "Licence agreements").

11.6 Assets

The Group's offices and R&D facilities are located in Amsterdam (Zekeringstraat 29, 1014 BV, the Netherlands). Avantium has entered into a lease agreement with respect to this location.

The Joint Venture and Avantium Support B.V. have entered into a framework service level agreement, pursuant to which the Group will provide and the Joint Venture will purchase certain facilities and services, such as the laboratory and office space, IT services, HR services, IP services and administrative services.

The Group has a Pilot Plant building with a 150m^2 floor space and a 30m^2 laboratory which is located in Geleen at the Chemelot campus (Urmonderbaan 22, 6167 RD, the Netherlands). This building housed the Pilot Plant of the YXY Technology, with a nameplate capacity of 15 ton FDCA. Currently the Pilot Plant is being relocated to a newly constructed building at the Chemelot campus with a 600m^2 floor space and 30m^2 quality control and 50m^2 process development laboratory. The lease agreement with respect to the newly constructed building has been transferred to the Joint Venture. The Group will use the previous building to house a new Renewable Chemistries pilot plant and, until the finalisation of the relocation of the Pilot Plant (expected in the first six-month period of 2017), sublease it to the Joint Venture.

Reference is made to Chapter 20 "General information", section 20.3 "Material contracts" under "Lease agreements".

11.7 Legal and regulatory environment

The Group's research and production facilities are currently all located in the Netherlands. The Group's activities are subject to a wide range of regulatory requirements relating to environmental and food under the laws of the EU as well as under national laws of the Netherlands.

Laws of the EU can either be adopted in the form of regulations, which directly apply in the Member States, or in the form of directives, which have to be implemented into national laws. Consequently, national laws can provide legal requirements implemented from EU Directives or provide national measures that are not governed by EU law or are stricter than EU Regulations.

[45] Evalueserve April 2016 report for Avantium.

This section summarises EU and Dutch legislation that is relevant for the business of the Group and the Joint Venture. Please note that this overview is not exhaustive and only provides a high level description of the relevant legislation.

Environmental legislation

REACH-Regulation

The main piece of legislation with respect to activities relating to chemicals is EU Regulation 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (the REACH-Regulation) as subsequently amended. The REACH-Regulation aims to protect the environment and human health from risks related to the use of chemicals in the industry, while at the same time providing opportunities for the industry to operate. The REACH-Regulation has direct effect in the Member States.

The REACH-Regulation applies (in principle) to all chemical substances. When certain chemical substances are used in a facility (in excess of certain levels) such use must be in compliance with the conditions in the REACH-Regulation *inter alia* relating to the collection and evaluation of data on the properties of the chemical substance and implementing any necessary measures.

The activities of the Group and the Joint Venture are subject to the REACH-Regulation in as far as the Group or the Joint Venture uses chemical substances in its business processes. The REACH-Regulation prescribes certain obligations for the Group with respect to the registration and evaluation of the use of the chemical substances as well as the provision of information on these substances to its customers.

Environmental Management Act

The Waste Framework Directive (2008/98/EC), the Water Framework Directive (2000/60/EG) and the Industrial Emissions Directive (2010/75/EU) and other environmental European legislation have been implemented in the Netherlands in the Environmental Management Act (*Wet milieubeheer*, the EMA).

The EMA provides for different categories of activities, where the most environmentally damaging activities can only be performed under an environmental permit (*omgevingsvergunning voor milieu*). Other (less invasive) activities may be performed after notifying the relevant competent authority. In that case, general statutory conditions apply to the relevant activities. In the case where an environmental permit is required, this environmental permit can include one or more of these statutory conditions, but other specific conditions to the operations and activities may be included as well.

In principle, the environmental permit is granted to the operator of a facility for an indefinite period, but changed circumstances may lead to a revision of the permitted situation. For example, when an environmental permit is old or a lot of (minor) amendments have been incorporated, the relevant authority may perform a revision of the environmental permit and grant a revised permit (*revisievergunning*). If the permit holder is not in compliance with the environmental permit, the relevant authority may enforce compliance or even suspend or revoke the environmental permit (for the relevant part).

The conditions of an environmental permit may also be related to so-called best available techniques (BATs). This implies that for a certain aspect, for example storage of nitrogen, reference is made to the BAT that governs storage of nitrogen. BATs are included in so-called BAT reference documents (BREFs). These BREFs provide for descriptions of the principles of the BAT relating to a certain subject as well as detailed prescriptions on how to comply with these principles. BREFs are reviewed and amended on a regular basis. The conditions of an environmental permit may, therefore, be amended through the incorporation of BATs.

The Group and the Joint Venture work under several environmental permits, each related to one of the facilities. For the facility in Amsterdam, the Group obtained an environmental permit under its own name. The Pilot Plant, which has been transferred to the Joint Venture, operates under a so-called umbrella environmental permit for the bigger (Chemelot) site. It is intended that the Joint Venture shall build a Reference Plant in Antwerp, Belgium, for the commercial production of FDCA. This plant shall be operated under an umbrella environmental permit for the BASF site, subject to Belgian law.

Given the activities of the Group and the Joint Venture, the conditions related to the permits are mainly related to aspects such as waste management, fire safety, noise, emissions of odour and air, storage of hazardous substances and more general environmental aspects relating to laboratories.

Nuclear Energy Act

The use of radioactive substances is governed in the Netherlands by the Nuclear Energy Act (*Kernenergiewet*, the NEA). The NEA and its subsequent governmental decisions provide for strict rules on the use, storage and transport of radioactive substances. It provides for additional obligations relating to the protection of employees as well as an obligation to obtain certain expertise when operating with radioactive substances or installations.

The use of radioactive substances and/or installations requires a nuclear permit. The Group currently holds a nuclear permit for its operations in the facility in Amsterdam, relating to the measuring equipment it uses.

Food legislation

On a European level extensive legislation is adopted to regulate the food industry. Part of this legislation sees to the materials that will or can come into contact with food, such as packaging or processing materials. As a certain level of food safety is the object of food legislation, food contact materials should also provide for a safe product that poses no or little risk to food safety.

EU Regulation 1935/2004 on Food Contact Materials (the FCM-Regulation) provides for a framework pertaining to food contact materials. In short, the FCM-Regulation prescribes that food contact materials may not pose a risk to food safety by means of migration to the food it contains, leading to a health risk or a change in (the organoleptic[46] structure of) the food.

To ascertain whether a food contact material poses a risk, the FCM-Regulation provides for a prohibition of the use of any food contact materials, unless the relevant food contact material has been authorised by the European Commission (the **EC**). Thus, when a new food contact material is intended to be used, firstly an authorisation has to be obtained from the EC. The EC will, upon the receipt of an application, request its scientific advisor, the European Food Safety Authority (the EFSA) to provide a scientific opinion on the relevant substance. Depending on the (favourable or negative) outcome of the EFSA opinion, the EC can provide an authorisation either with or without restrictions.

The FCM-Regulation is a framework regulation and provides for the adoption of specific measures relating to specific products. One of these specific measures is EU Regulation 10/2011 on plastic materials intended to be food contact materials (the Plastics Regulation). The Plastics Regulation provides for specific conditions for the use of plastics as food contact materials. The annex to the Plastics Regulation contains a list of authorised plastics as food contact materials. In case of a new substance, such substance needs to be included in this annex in order to be authorised as a food contact material.

When a substance is authorised, certain conditions apply to the production, handling and trading of the food contact material. These conditions see to *inter alia* the labelling of the product. The manufacturer has to indicate (through a symbol) that it is - or is intended to be - a food contact material. Also, there are certain requirements with respect to the documentation of the manufacturing process in view of traceability requirements and recall procedures.

Further, during the handling and trading of the food contact material, the food contact material needs to have a declaration of compliance, stating that the relevant food contact material is in compliance with the relevant legislation (of the Plastics Regulation, the FCM-Regulation and the regulation that pertains to good manufacturing principles for food contact materials (2023/2006/EC)).

The food legislation is relevant for the Joint Venture as it intends to produce PEF as packaging material that will come into contact with food.

For FDCA, a scientific opinion dated 25 February 2015 was adopted by EFSA (replacing its earlier scientific opinion on the same matter of 20 October 2014). This opinion contains a safety assessment of FDCA for the use as a monomer with ethylene glycol to produce PEF-polymer. The EFSA comes to the conclusion that FDCA does not raise a safety concern for the consumer when the substance is used as a monomer in the production of PEF polymer and the migration of the substance itself does not exceed 5 mg/kg food. However, the EFSA imposed certain restrictions on the use of FDCA relating to the maximum migration level set by the EFSA as well as to the estimates of ethanol made by the EFSA. The limits were set based on 20% ethanol tests, which were considered to be more representative and still conservative for the intended use. The potential impact of these restrictions might be the following (from low to high impact): (i) end-users may have to build a dossier to prove that PEF in their application(s) complies with the restrictions, (ii) the Group may have to support end-users to build that dossier or (iii) end-users or the Group may have to initiate a request to change the Plastics Regulation.

FDCA is included in the Plastics Regulation as a food contact material by the sixth amendment to the Plastics Regulation (1416/2016). The European Commission included the restrictions proposed by EFSA in its scientific opinion referred to above. The exact (technical) limitations and restrictions for FDCA are included in *Table 1* of *Annex 1* of the Plastics Regulation.

The request for clearance for the use of PEF in the United States to the Food and Drugs Administration (**FDA**) through Food Contact Notifications (FCN) has not yet been initiated. Clearance in the United States relates to the polymer formulation instead of the monomer, as is the case in the EU. The process for completing the FCN review has a strict time limit (120 days). Once the FCN becomes effective, the polymer may be lawfully used in the specific applications. The Company expects that it will request clearance for the use of PEF in the United States in 2018. Contrary to the EU clearances, the FCN's are proprietary to the notifier or manufacturer and are specific for the final manufacture process.

Other relevant legislation

<u>Labour conditions</u>
When chemical products are used and/or produced, it is likely that employees involved in the process may become exposed to the products and production process. To safeguard the safety of the employees in such situation, the Dutch Labour Conditions Act (*Arbeidsomstandighedenwet*) and Labour Conditions Decree

[46] The aspects of food, water or other substances that an individual experiences via the senses.

(Arbeidsomstandighedenbesluit, the LCD) provide for extensive regulations relating to the protection of employees in their operations.

The Group and the Joint Venture *inter alia* use substances that are (to a certain degree) explosive or used in an explosive atmosphere. The LCD provides for additional safety measures, such as certain personal protection gear for employees (as prescribed by EU Directives on explosive atmospheres). Also, other more general aspects of a work environment, such as noise and safety, are governed by the LCD. In these and other circumstances, the LCD provides for protective and monitoring measures which must be taken by the Group or the Joint Venture.

The Group and the Joint Venture have to perform an occupational hazard assessment periodically to review the potential risks for their employees and subsequently act upon such assessment.

11.8 Corporate social responsibility

Safety

Safety is of the utmost importance to the Group. All of the Group's employees have committed to a list of so-called 'Golden Safety Rules', which remind the Group and its employees every single day to take safety very seriously. The Group has implemented its Golden Safety Rules and has procedures and good safety systems in place, but knows that continuous attention and awareness (behaviour and culture) is required to ensure that it operates in a safe manner.

Towards 2G feedstock

Building blocks created by the YXY Technology, are created from commercially available biobased feedstock. A large variety of feedstock can be used which offers the Group and the Joint Venture considerable flexibility in their sourcing. Avantium believes that all feedstock for the YXY Technology currently adheres to the so-called SARA principle:

- **S**ustainable production;
- **A**vailable at the production site;
- **R**eliable logistics; and
- **A**ffordable.

The Group, through Project Zambezi, is already developing processes based on feedstock from 2G non-food crops aiming to ensure that the Group's technologies are fully compatible to this new 2G feedstock. See also this chapter, section "Renewable Chemistries", subsection "Project Zambezi".

Reduced carbon footprint

The Copernicus Institute of Sustainable Development at the University of Utrecht, the Netherlands, an independent organisation specialised in making Life-Cycle-Analysis, performed in 2012 a cradle-to-grave assessment of non-renewable energy usage and carbon emissions. The results of this assessment demonstrated that the production of PEF could reduce carbon emissions and non-renewable energy use by 50-70% compared to PET.[47] The Joint Venture will perform a new Life-Cycle-Analysis taking into account the latest set up of the YXY Technology's PEF production process.[48]

Bio-oils isolated in the YXY Technology process as fuel

The Joint Venture intends to use the bio-oils, which are isolated as part of the production process of FDCA, as fuel for the Reference Plant. Apart from the cost savings, this would help the Joint Venture to reduce the overall use of fossil fuels and reduce waste production.

11.9 Insurance

The Group is insured under insurance policies that are customary for its activities. Its insurance policies are with several insurance firms covering various risks, including material damage and business interruption, business liability, environment liability, professional indemnity liability, employer's liability, transport, construction all risks (for the benefit of its Catalysis business) and personal accidents. The Group recently amended the construction all risks insurance. As a consequence, coverage under this insurance outside the Netherlands is limited to the costs of repair made in the event the work would have been carried out in the Netherlands. This insurance does not cover work in countries which require a local insurance. The Group will take out insurances regarding these activities outside the Netherlands on a case by case basis.

[47] Eerhart, Faaij & Patel: *Replacing fossil-based PET with biobased PEF; process analysis, energy and GHG balance*, Energy & Environmental Science - Issue 4, 2012.

[48] Eerhart, Faaij & Patel: *Replacing fossil-based PET with biobased PEF; process analysis, energy and GHG balance*, Energy & Environmental Science - Issue 4, 2012.

11.10 Employees

As of 30 September 2016, the Group employed 141 full time equivalents (**FTE**), of which 44 are employed in the Catalysis business unit, 23 are employed in the Renewable Chemistries business unit and 22 are part of the support team. Approximately 51 FTE, previously employed by the Company, are employed by the Joint Venture since its incorporation on 30 November 2016.

Since 30 September 2016, there have been no other significant changes in the number of employees employed by the Group or the Joint Venture, measured in FTE.

11.11 History

Avantium was founded in February 2000 as a spin-off from Royal Dutch Shell. Its objective was to accelerate and exploit the application of high-throughput R&D, initially developed by Royal Dutch Shell for catalysis research, across a range of industries. The name “Avantium” is rooted in the Latin word for “forerunner”.

In 2000, Avantium established an R&D satellite laboratory at the Delft University of Technology. In the same year, Avantium entered into a collaboration with the University of Leiden to develop high-throughput technology for crystallisation research for small molecules in drug development. The activities were initially conducted through a subsidiary, Crystallics B.V. and later transferred to Avantium Technologies B.V. in 2003.

In 2003 and 2004, Avantium restructured its business. As part of this reorganisation, Avantium divested its software platform for laboratory automation, Virtual Lab, to Mettler-Toledo, closed its operations in Hexham and Delft, and discontinued certain other non-core activities. At the same time, Avantium expanded its business development team and started to focus on providing high-throughput technology-based R&D services to companies in the chemical and pharmaceutical industries. In 2005, Avantium commenced to also offer R&D systems to its customers, enabling them to apply high-throughput techniques in their own laboratories, and started to leverage its expertise in high-throughput R&D by initiating its own proprietary development projects.

In 2007, Avantium planned an initial public offering and listing on Euronext Amsterdam. However, due to adverse market conditions at that time, the initial public offering was withdrawn.

In 2008, Avantium welcomed Aescap, Capricorn, ING and Navitas as new shareholders.

In March 2011, Avantium divested its services business for the pharmaceutical sector, through a management buy-out into Crystallics B.V.. This allowed Avantium to focus on chemicals and renewables, which it believes are the highest value opportunities.

In June 2011, Avantium attracted Sofinnova Partners, Aster Capital and Timber Invest as new investors. In addition, Avantium secured a subsidy of €1 million and an innovation credit of €4 million from the Dutch Ministry of Economic Affairs, Agriculture and Innovation.

In December 2011, the Group opened the Pilot Plant. The Pilot Plant focused on demonstrating the scale up of the YXY Technology process from the R&D lab and to produce sufficient volumes of FDCA and PEF for application development by the Group’s development partners, including The Coca-Cola Company, Danone and, since 2013, ALPLA.

In May 2014, Avantium welcomed four new shareholders: Swire and Avantium’s then already existing development partners, The Coca-Cola Company, Danone and ALPLA.

By the end of December 2014, Avantium sold its crystallisation systems business to Technobis Group B.V.

During 2010-2015, Avantium was included in the ‘Global Cleantech 100’ for six years in a row and was elected ‘European Cleantech Company of the Decade’ in 2014.[49] The Global Cleantech 100 features companies that are considered to be best positioned to solve tomorrow’s clean technology challenges and to make the most significant market impact.

In March 2015, Avantium signed a memorandum of understanding with BASF to establish the Joint Venture. On 23 September 2016, Avantium and BASF signed the Joint Venture Agreement. The Joint Venture was formally established on 30 November 2016.

In December 2015, Avantium entered into a framework agreement with Mitsui to collaborate on commercialising FDCA and PEF in specific applications in the Asian region, which framework agreement was replaced by a restated framework agreement in 2016.

In December 2016 the Group acquired the assets (IP, know-how and hardware) from Liquid Light.

[49] Cleantech Group, *Global ‘15 Cleantech 100 - A Barometer of the Changing Face of Global Cleantech Innovation*, p. 3 and 8.

12 INDUSTRY

The information presented in this Chapter is taken or derived from the sources identified in Chapter 5 "Important Information", section 5.6 "Market and industry Information". In addition, certain statements below are based on the Company's own proprietary information, insights, opinions or estimates, and not on any third party or independent source; these statements contain words such as 'the Group believes', 'the Group expects', 'the Group sees', and as such do not purport to cite, refer to or summarise any third party or independent source and should not be so read.

12.1 Industry dynamics: transition from fossil-based to renewable chemistry

The global chemical industry is a €3.2 trillion market, based on total turnover in 2015. The chemical industry creates a variety of products which affect virtually every aspect of peoples' lives, including fuels, medicines, food ingredients and materials. The chemical industry converts raw materials such as petroleum, natural gas, and starches and minerals into products that can be clustered into petrochemicals, plastics, inorganics, specialty chemicals and consumer chemicals.[50]

While there is an ongoing process of innovation and technological development in the chemical industry, petroleum is still the primary feedstock. The significant reliance on fossil resources presents the chemical industry with a number of challenges for the following reasons:

Petroleum is a finite, non-renewable resource that is in growing demand

Chemical companies are heavily dependent on petroleum (oil), a finite, non-renewable resource that is in growing demand, particularly from developing economies such as India and China. Petroleum is used as an energy source and as feedstock for the production of chemicals and plastics. While worldwide demand is growing, recent supply growth has been limited. As the more accessible, conventional supplies will be exhausted, more technically demanding resources will need to be exploited. Unconventional oil developments (such as from bitumen and oil shales) are more expensive to produce and have higher carbon intensities.[51]

Need to limit greenhouse gas emissions and environmental footprint

On a global scale, one of the main challenges to the environment comes from the emission of greenhouse gas emissions (GHGs), predominantly methane and carbon dioxide (CO2).[52][53] GHGs drive global warming and climate change. Around 40% of global CO2 emissions arise from industrial processes of which 17% from the chemical industry. Effects of the production and use of goods and services on climate are often referred to as "environmental footprint".[54] At the United Nations Climate Change Conference in Paris in 2015, 195 countries reached an agreement to accelerate the reduction of GHGs and the goal of keeping average global warming below 2 degrees Celsius.[55]

Increasing government regulation

Climate change regulations and initiatives are increasing[56] and can drive up the cost of using fossil resources and CO_2 emitting processes, such as chemical production processes using petrochemicals. This can for example be illustrated by a growing number of governments that have implemented, or are considering implementing, policies related to plastic packaging.[57] This may result in an increased use of materials from renewable resources, processed in an energy efficient way, resulting in a smaller environmental footprint.[58]

Increasing demand for renewable, sustainable products and a circular economy

There is a societal demand for an environmentally sustainable, low-carbon future[59] and the circular economy is on the agenda of decision makers across business, government and academia[60]. The circular economy is an industrial system that is restorative and regenerative by design. It rests on three main principles:

- preserving and enhancing natural capital by controlling finite stocks and balancing renewable resources;

[50] Www.cefic.org/Facts-and-Figures/Chemicals-Industry-Profile,www.essentialchemicalindustry.org/the-chemical-industry/the-chemical-industry.html.
[51] Www.iea.org/publications/freepublications/publication/Resources2013.pdf.
Www.eia.gov/forecasts/ieo/industrial.cfm.
[52] Www.iea.org/publications/freepublications/publication/Resources2013.pdf.
[53] Www.climate.nasa.gov/causes/.
[54] Www.ec.europa.eu/environment/eussd/pdf/footprint/PEF%20methodology%20final%20draft.pdf.
[55] Www.unfccc.int/resource/docs/2015/cop21/eng/l09.pdf.
[56] Www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/how-companies-can-adapt-to-climate-change.
[57] Www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf.
[58] Morgan Stanley blue paper 2012 – 'Green is good' – The potential of bioplastics.
[59] Www.iea.org/publications/freepublications/publication/Resources2013.pdf.
[60] Www.ellenmacarthurfoundation.org.

- optimising resource yields, for example via improved recycling and using agricultural and forestry waste as feedstock; and
- fostering system effectiveness including for example the reduction of GHGs.

This new economic model seeks to ultimately decouple global economic development from finite resource consumption.[61]

Consumers become increasingly aware of the environmental footprint of products in terms of packaging and materials[62] and are raising environmental and sustainability concerns with packaging manufacturers[63] and brand owners.[64] Consumers may favour non-petrochemical based alternatives, especially if these products are readily available, offer benefits and are priced competitively. Companies are increasingly using sustainability and renewability as a product differentiator.[65] For example, the sales of Dasani waters owned by The Coca-Cola Company increased by 20% since the introduction of a partially biobased bottle in 2009.[66]

Petroleum price volatility

Petroleum prices have experienced significant price volatility over time. For example, during the last ten years, the market price per barrel ranged from US$27 to US$141.[67] The unpredictable cost of supply for fossil feedstock-based products is a risk for the chemical industry and downstream users. Diversification into renewably sourced alternatives is a way to address this risk.

All these challenges require the chemical industry to accelerate the transition to renewable feedstock and sustainable processes and to adopt new process technologies to produce chemicals and materials on the basis of renewable resources.[68] In this transition, biomass will play a critical role.[69]

The shift from fossil-based to renewable materials is especially relevant in the plastics industry, where biobased plastics aim to substitute fossil-based plastics, such as PET. Avantium is a pioneer in the transition to renewable plastics with its in-house developed plastic PEF, which is not only 100% biobased, but also possesses superior performance characteristics to PET. These properties strategically position PEF as substitution for PET, which is one of the most widely used plastic in the world. In addition, due to its superior properties PEF is a natural alternative to other widely used packaging materials, such as aluminium, glass and carton.

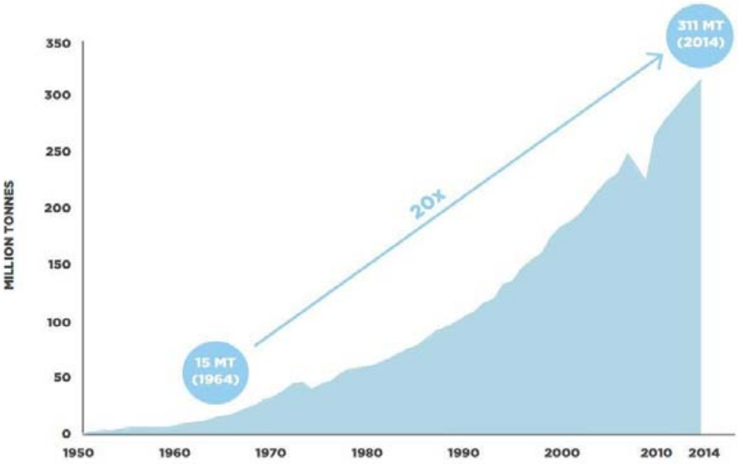
In first instance, the Joint Venture intends to focus on markets for high-value PEF applications and specialties in the food and beverages packaging industry, leveraging (i) the unique properties of PEF and (ii) the sustainability profile of PEF. The Group believes that PEF market acceptance will follow a ‘value curve’: introduction will start in those applications, brands, countries and channels where the value of the PEF properties is highest and over time, and as costs come down, it will expand to lower value segments.

Within its broader development portfolio, Avantium operates in the field of renewable chemistry, where it aims to develop sustainable solutions, building on its long-standing expertise in chemical processes and catalysis R&D (as further described in Chapter 11 “Business”).

12.2 Plastics industry and PET market

Plastics are used for a wide range of applications, such as plastic bottles for beverages, films for food packaging and electronics, fibres for textiles, coatings and engineering plastics for home appliances or automotive parts. The plastic market has gone through a strong growth phase over the past 50 years: from 15 million ton per year in 1964 to 311 million ton per year in 2014, as illustrated in the figure below. Plastics are essential materials in people’s everyday live and production is expected to double again in the next 20 years (to 622 million ton) and almost quadruple by 2050 (to 1,124 million ton).[70]

[61] Www.ellenmacarthurfoundation.org.
[62] Morgan Stanley blue paper 2012 – ‘Green is good’ – The potential of bioplastics.
[63] Www.pwc.com/gx/en/forest-paper-packaging/pdf/sustainable-packaging-threat-opportunity.pdf.
[64] Www.fooddrinkeurope.eu/documents/brochures/brochure_CIAA_envi.pdf.
[65] Morgan Stanley blue paper 2012 – ‘Green is good’ – The potential of bioplastics.
[66] Www.forbes.com/sites/greatspeculations/2014/01/30/beverage-companies-go-green-in-hope-to-sell-more-water/#6a8b5ae217d3.
[67] Europe Brent Spot Price FOB (US$ per Barrel), U.S. Energy Information Administration, www.eia.gov.
[68] Www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf.
[69] United States’ Federal activities report on the bio economy (2016).
[70] Www.ellenmacarthurfoundation.org.



Graph (1) Plastic production 1950 - 2014[71]

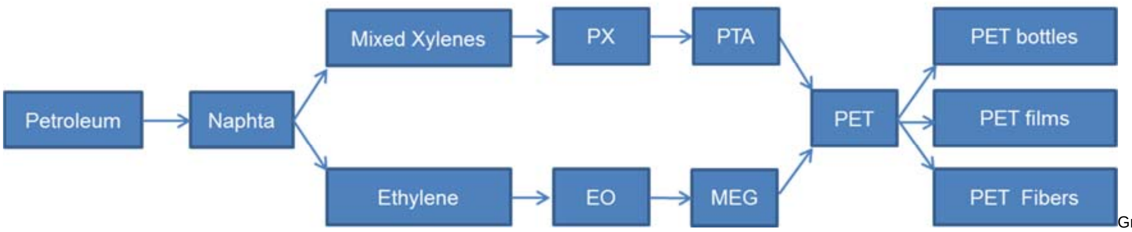
The shift from fossil-based to renewable materials is especially relevant in the plastics industry

Plastics have substantial benefits including low weight, low costs and high performance. The plastics industry is however highly reliant on petroleum and gas, which make up more than 90% of its feedstock. The chemical industry is currently using about 6% of the yearly global petroleum consumption as feedstock for the production of plastics. For the next 20 years, the plastics market is expected to grow around 3-4% per year, which is much faster than the expected growth of petroleum production of around 0.5% per year. If the chemical industry would continue to rely on petroleum as its primary feedstock for making plastics, the plastics portion of the petroleum usage is estimated to increase from 6% to 20% by 2050.[72] The current production and use of plastics is estimated to generate approximately 390 million ton of CO_2 per year. To reduce this dependency on fossil resources and related CO_2 emission, the plastics industry must decouple the production of plastics from fossil feedstock and accelerate the transition to cost and performance competitive biobased plastics.[73]

Introduction to PET, one of the most widely used plastics in the world

One of the most commonly used plastics is Polyethylene Terephthalate (**PET**).[74] PET is used primarily in synthetic fibres (textiles, clothing), bottles (containers for beverages and food) and films (food packaging). The global PET market has demonstrated an 8.3% compound annual growth rate (**CAGR**) for the period 2011-2014. In 2014, global PET consumption was estimated at 61 million tons,[75] representing a US$91 billion market[76] and a market opportunity for the YXY Technology developed by Avantium.

PET is a polymer that is produced on the basis of two monomers: purified terephthalic acid (**PTA**), which makes up approximately 70% of the PET by weight, and mono-ethylene glycol (**MEG**), which makes up the other 30%.[77] PTA is made from petroleum-based para-xylene. MEG is a monomer that is primarily made from petroleum and natural gas, by a multi-step synthetic process via ethylene and ethylene-oxide. The production of PET is illustrated below.



Graph (2) the production of PET. Source: PCI

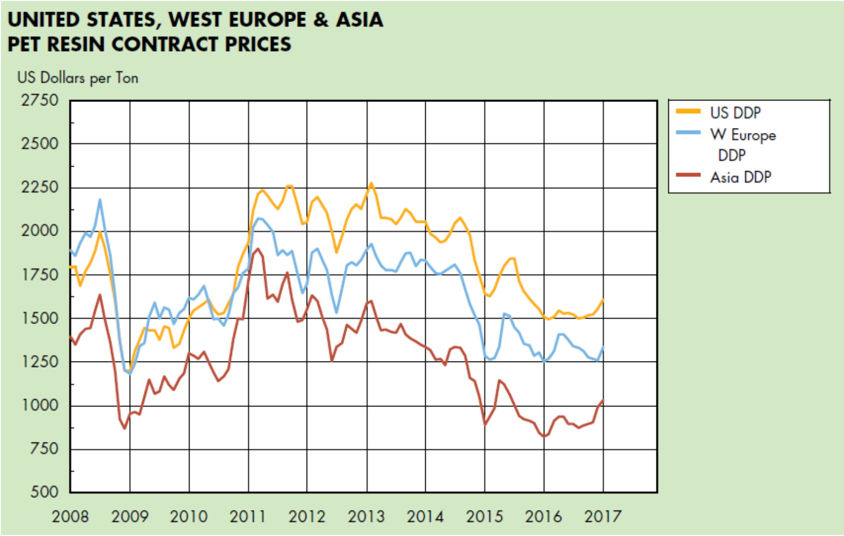
71 PlasticsEurope, Plastics – the Facts 2013 (2013); PlasticsEurope, Plastics – the Facts 2015 (2015) Note: production from virgin petroleum-based feedstock only (does not include biobased, greenhouse gas-based or recycled feedstock).
72 Www.ellenmacarthurfoundation.org.
73 Www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf.
74 Www.plasticseurope.org/what-is-plastic/types-of-plastics-11148.aspx.
75 IHS Chemical Economics Handbook PET Polymer, May 2015.
76 At US$1,500 per ton. See for historic PET prices graph 3 and 4.
77 Www.coca-colacompany.com/stories/plantbottle-frequently-asked-questions.

The world's largest producers of PTA are BP and Yisheng Petrochemical. The world's largest producers of MEG include Sabic and MEGGlobal, a joint venture between Dow and PIC.[78] Over 50% of PET is produced and consumed in China, where producers have heavily invested in the textile value chain to increase supply to domestic and export markets. The world's largest producers of PET include Indorama, Reliance, DAK, M&G, China Resources Packaging and Far Eastern New Century.[79]

The global MEG market consumption was 25 million ton in 2013 and is projected to grow to 34 million ton by 2020 at a CAGR of 5%,[80] representing a US$34 billion market:[81]

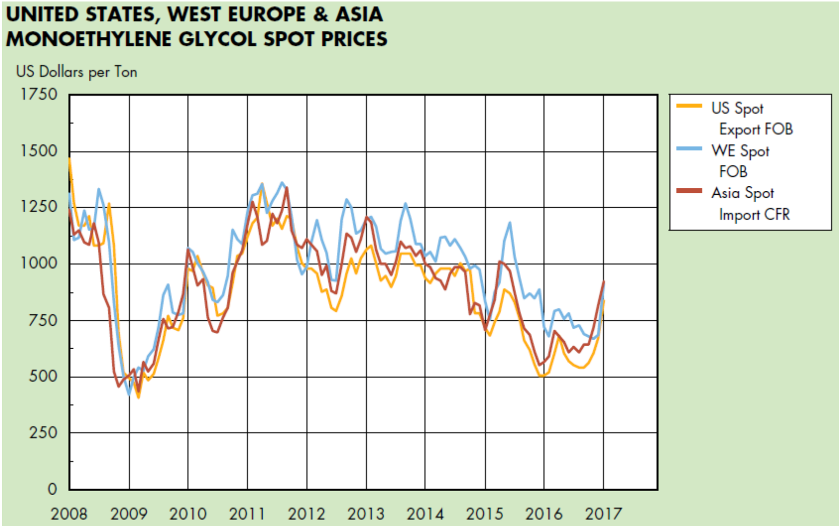
Application		Volume (in million ton (Mt))
Polyester fibre	Clothing, carpets, cords	14 Mt
PET packaging	Bottles	6 Mt
Antifreeze	De-icing fluids	2 Mt
PET film	Sealing, printing wraps, pouches	2 Mt
Industrial use	Solvents	2 Mt

The PET and MEG pricing is mainly depending on the fossil feedstock price, the process economics of the manufacturing and the balance between supply and demand. Approximately 1% of the MEG production (250,000 ton) is currently biobased, with the sales price of biobased MEG being 30-35% higher than fossil-based MEG, This market is an opportunity for Avantium's Mekong technology to produce cost-competitive biobased MEG. Based on the below graph, the Company believes that the longer term sales price of PEF ranges from US$1.500 to US$2.500 when produced at industrial scale. The price history of PET and fossil-based MEG is depicted below:[82]



Graph (3) price history of PET

[78] Nexant Petrochemical Market Dynamics Polyester & Intermediates December 2014.
[79] IHS Chemical Economics Handbook PET Polymer, May 2015.
[80] Nexant Petrochemical Market Dynamics Polyester & Intermediates December 2014.
[81] At US$1,000 per ton.
[82] Tecnon Orbichem, May 2016.



Graph (4) price history of MEG

12.3 Packaging

12.3.1 Packaging materials

Approximately a quarter of the plastics market is used for packaging.[83] Packaging materials are used for convenience in transportation and handling as it protects against physical damage (drop and puncture), to keep food and beverages in good condition until consumption as it acts as a barrier against gases (oxygen and water), chemicals and dirt and for advertising.[84]

The table below provides information on the main packaging materials:[85]

Packaging material	**Packaging format**	**Advantages**	**Disadvantages**
Polyethylene-Terephthalate (PET), a rigid plastic	bottles, jars, thermoformed products, films	- low-cost - lightweight - transparent - easy to recycle - barrier properties - no impact on taste	- insufficient gas barrier for certain applications (e.g. small size CSD, beer and ketchup) - insufficient temperature stability for hot-fill applications (e.g. juices and sauces) - petroleum-based - environmental footprint
Low-density poly-ethylene, a flexible plastic	films	- very low-cost - lightweight - transparent - chemical resistance	- low strength and stiffness - poor gas barrier - poor temperature stability - many additives required to improve performance resulting in taste and health impact - difficult to recycle - petroleum-based - environmental footprint
High-density poly-ethylene (**HDPE**), a semi-rigid	bottles	- very-low cost - lightweight - semi-translucent - chemical	- not transparent - poor gas barrier - poor temperature stability - sensitive to UV light

83 Www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf.
84 .
85 PETcore: www.petcore-europe.org/what-pet-0, National Association of Container Distributors: www.blog.nacd.net/plastics-series-all-about-ldpe, ICIS, www.icis.com/resources/news/2007/11/06/9076157/polyethylene-low-density-ldpe-uses-and-market-data/, www.packaginginnovation.com/packaging-materials/plastic-packaging-2/advantages-and-disadvantages-plastic-packaging/, Britsh Plastics Foundation l, www.bpf.co.uk/plastipedia/polymers/pp.aspx, and the Glass Packaging Institute: www.gpi.org/learn-about-glass/benefits-glass-packaging, www.aluminiumleader.com/application/packaging/, www.packaging-gateway.com/features/feature60/.

plastic		resistance	- recyclable into lower value applications - petroleum-based - environmental footprint
Polypropylene, a semi-rigid plastic	containers, trays, films	- low-cost - lightweight - temperature stability - chemical resistance	- not transparent - poor gas barrier - sensitive to UV light - difficult to recycle - petroleum-based - environmental footprint
Glass	bottles, jars	- transparent - recyclable - superior barrier properties - no impact on taste - temperature stability	- expensive - heavyweight - fragile - safety concerns - takes up space - energy intensive to recycle - environmental footprint
Aluminium	cans, films, cartons	- barrier properties - recyclable - temperature stability - lightweight - can be used in multi-layer structure with other materials	- expensive raw material - not transparent - energy intensive to process - alleged health impact inside coating86 - not microwavable- detrimental for recycling in multilayer laminates - environmental footprint
Paper board	carton	- easy to print - lightweight - renewable	- not transparent- easily damaged - requires coating for barrier properties and water-resistance - difficult to recycle multilayer laminates

Avantium has developed the proprietary YXY Technology to catalytically convert plant-based sugar (fructose) into a wide range of biobased chemicals and plastics, such as PEF. PEF is a 100% biobased, 100% recyclable plastic with superior performance properties compared to today's widely used packaging plastics. PEF has superior barrier and more attractive thermal and mechanical properties compared to PET and offers a reduced carbon footprint compared to PET at industrial scale. PEF allows for a wide range of applications, ranging from packaging of soft drinks, water, alcoholic beverages, fruit juices, food and non-food products (such as personal care and household products) to film and fibre applications. For more information on PEF, see Chapter 11 "Business".

The global glass packaging market represented in 2013 a volume of 47 million ton and with a CAGR of 4% the market is expected to reach a value of US$68 billion in 2020;[87] the metal (predominantly aluminium) packaging market is expected to grow by about 2% annually to reach US$125 billion by 2017.[88] The global PET market for bottle applications represented in 2014 a volume of 19 million ton[89] with a value of US$29 billion[90] and the cartons market for food containers represented in 2015 a value of US$35 billion.[91]

12.3.2 Packaging formats

Packaging formats include containers (bottles, cans and jars), thermoformed trays and films (pouches). The choice for packaging format and material (e.g. glass, aluminium, PET) is determined on the basis of costs, technical performance, environmental and marketing criteria, which are different for each product. For example, oxygen sensitivity of food will dictate barrier properties required to achieve target shelf life. In addition, different materials can add differentiating features to the packaged product. Transparent polymers are often used to

86 Www.hsph.harvard.edu/news/press-releases/bpa-chemical-plastics-leach-polycarbonate-drinking-bottles-humans/.
87 Www.researchandmarkets.com/research/qhk57v/glass_packaging.
88 Www.smitherspira.com/industry-market-reports/packaging/metal/global-metal-packaging-industry-market-2017.
89 IHS Chemical Economics Handbook PET Polymer, May 2015.
90 With a price per ton of US$1,500.
91 IBIS world 2015.

package fresh fruits and vegetables to indicate freshness and polymers with superior thermal resistance enable convenient cook in pack options.

Food and beverages bottle packaging

The main packaging formats used for food and beverages that could be replaced by PEF bottles are PET bottles, glass bottles, metal cans, cartons and HDPE bottles (High-density polyethylene). The table below provides information on the number of packaging units annually sold worldwide per volume for each packaging format:[92]

Packaging format	**Main applications**	**Million units per size (litres)**			**Total**
		< 0.5L	**≥0.5L, <1.0L**	**≥1.0L**	
Glass bottles	Beer, CSD, wine, liquid food	235,132	197,816	76,036	508,984
PET bottles	Water, CSD	75,756	237,234	149,448	462,437
Metal cans	Beer, CSD	310,486	27,213	914	338,614
Cartons	Dairy food & drinks, juices	226,507	26,158	22,111	274,776
Other plastic bottles (HDPE/rigid)	Liquid food	48,977	10,422	6,264	65,663
TOTAL		**896,859**	**498,844**	**254,772**	**1,650,475**

The Company believes to first gain market share in the packaging formats smaller than 0.5 litre as in this segment the (barrier) properties of PEF are most beneficial. The Company estimates PEF bottles smaller than 0.5L to have an average weight of 19 grams per unit, with a range of 12 gram (0.2L water bottle) to 22.5 gram (0.4L liquid food bottle). The Company further expects PEF bottles between 0.5L and 1L to have an average weight per unit of 21 grams with for example a 0.5L water bottle weighing 20 grams and a 0.5L bottle for alcopops 22.5 grams. The Company expects PEF bottles of over 1L to weigh on average 36 gram per unit. For reference, the following table provides weight and costs for certain volumes and existing packaging formats:

Packaging format	**Size (L)**	**Weight (g)**	**Purchase price (€0.01)**[93]
Can aluminium	0.33	10.2	8.1
Can aluminium	0.50	12.9	9.5
Glass	0.33	31.0	6.8
PET (CSD)	0.33	21.0	3.5
PET (CSD)	0.50	24.0	4
PET multi-layer	0.50	25.0	6.5
PET (water)	0.33	14.0	2.4
PET (water)	0.50	26.0	4.3
PET (liquid food)	0.22	19.0	4.2
PET (liquid food)	0.40	28.0	6.1
PET (liquid food)	0.60	37.0	8.0
PET (liquid food)	0.80	45.0	9.7
PET (juice)	0.33	21	4.5
PET (juice)	0.5	25	5.3
Carton (juice)	0.5	20	6.6

[92] Canadean (2014), database with 2013 packaging information.

[93] Schönwald Consulting 2014 (non-public) reports for Avantium. Purchasing price of containers by bottler for 10 million units at a PET resin price of €1,250 per ton. For PET for liquid food and PET and carton for juice: purchasing price of containers by bottler for 10 million units at a PET resin price of €1,100 per ton. The PET resin price determines the price of preforms by about 85%.

In the global beverage packaging industry, PET is the most common packaging material for water and CSD due to its low weight, transparency and low cost. Due to these properties, PET is expanding its share in CSD (at the expense of glass and cans). In the global beer market, glass and cans are the dominant packaging materials, due to the high gas barrier needed to preserve beer, the need for in bottle pasteurisation, and traditional consumer preferences.

The market for CSD is highly concentrated and dominated by two major brand owners, The Coca-Cola Company and PepsiCo. In 2013, they together sold 59 billion litres in the four biggest markets, the United States, Brazil, China and Germany and had an overall market share of 47% and 23% respectively.[94] The CSD market is under pressure due to links between high sugary drinks and obesity and associated health effects. Volumes are therefore decreasing in established markets. The trend is moving towards CSD with reduced sugar content (such as Coca-Cola Life) and smaller packages, which both generate higher margins.[95]

The market for water is dominated by major brand owners such as Nestle (Perrier and Vittel), Danone (Evian), PepsiCo (Aquafina) and The Coca-Cola Company (Dasani). Between 2013 and 2014, consumption of bottled water increased by 7% in the United States. Some companies experience cannibalising sales of carbonated beverages due to the growth in bottled water sales. In the water market there are many large local players providing drinking water for daily consumption in areas where tap water is not suitable for drinking. There are brand owners bottling high-end mineral waters directly from the source and supplying these globally. Questions have been raised regarding the sustainability of shipping bottled water around the globe.[96]

Multiple trends influence the packaging industry as producers look to reduce costs, enhance features of the packaging and improve their overall functional performance. In food packaging, a shift from cans and glass containers towards PET bottles and pouches is observed.[97] Production of cans is energy-intensive and more expensive and the inside coating of cans contains bisphenol A (BPA) which allegedly imposes health risks.[98] Glass is a fragile, heavy, less flexible and more expensive packaging material. PET or other polymer packaging also offers a wider range of shaping and filling possibilities. Compared to a 330g glass container, an equivalent PET embodiment can result in 36% energy savings and a reduction of approximately 2000 tons of CO_2 emissions, and an 85% material reduction per jar.[99] Weight reduction also results in major transportation cost benefits including the shipment of 30% more product by weight per truck.[100] There are, however, some unresolved issues with PET containers, which offers an opportunity for PEF:

- PET often relies on oxygen scavengers to achieve the required shelf life – this adds cost and can have recycling implications;[101]

- PEF could achieve a longer shelf life without coatings or the use of oxygen scavengers.

The beverage packaging market has also shown a move away from glass and metal to PET.[102,] However, PET lacks some of the technical properties required for certain products, e.g. insufficient CO_2 and oxygen barrier.[103] This represents a significant opportunity for PEF, given PEF outperforms PET on barrier properties, even with a thinner wall than PET, and offers a non-shatter alternative to glass.

Thermoformed trays

A fast growing packaging format for food is trays for salads, (microwave) ready-meals, savoury and deli foods, meat and bakery products. These trays are made by a process called thermoforming, where a plastic sheet is heated and formed to a specific shape in a mould and trimmed to create a usable product. PET and PP are the most commonly used materials for thermoforming. In 2013, 136 billion food trays were sold with the largest markets being for savoury & deli foods (33%) and prepared meals (15%). The market for thermoformed food trays was estimated at €9.5 billion. The market demand for medium barrier thermoforming is estimated at 284 kta and for low barrier at 3.428 kta.[104] The Group believes that 60% of this volume in PEF is required to supply the same market demand. The Company expects PEF to gain market share first in the medium barrier segment as

94 Canadean (2014), database with 2013 packaging information.
95 Www.forbes.com/sites/greatspeculations/2014/08/06/could-smaller-servings-boost-margins-for-coca-cola-and-pepsi-amid-soda-slowdown/#5239b04038ea).
96 IHS 2016: Bio-Based Furan Dicarboxylic Acid (FDCA) an Its Polymer Polyethylene Furanoate (PEF).
97 Www.smitherspira.com/news/2016/february/global-packaging-material-outlooks.
98 Www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf.
99 Www.amcor.com/about_us/media_centre/news/amcor-unveils-first-hot-fill-pet-containers-for-us/
100 PA consulting, (non-public) report for Avantium, August 2016.
101 Www.ptonline.com/articles/barrier-pet-bottles.
102 Www.packagingdigest.com/packaging-design/5-persistent-food-and-beverage-packaging-trends-2016-05-19. WPO report, "Market Statistics and Future Trends in Global Packaging", 2008.
103 Bruckner report - Biaxially Oriented BOPP Barrier Films with thin EVOH Layers.
104 PA consulting, report for Avantium, July 2015.

the PEF properties benefits this packaging volume segment most. PEF has a good oxygen barrier (to avoid spoilage), and is transparent and recyclable. These features could enable the following benefits:[105]

- Potentially reducing the need for a cold supply chain and therefore reducing retailers supply chain cost[106] and enabling new opportunities for brand owners to enter the fresh food market currently dominated by retailers.[107] Brand owners generally have longer supply chains than retailers[108] and therefore would rely on packaging barrier properties to enable the required shelf life.
- Potentially reducing the frequency of wastage of out of date product and therefore reducing costs.[109]
- Potentially increasing sales of higher margin products due to PEF's transparency and sustainability credentials and attractiveness of extended shelf life to consumers.

Avantium collaborates with WIFAG Polytype Group (Switzerland) on the use of PEF for thermoforming. WIFAG Polytype Group is a leading manufacturer of thermoforming and printing equipment, and the sole company producing the entire range from sheet extrusion, to thermoforming, coating and printing of thermoformed products.[110]

Film

Biaxially-oriented films (polyester films made from e.g. polypropyleen or PET) are being used in packaging (57%) and non-packaging (43%) applications. Non-packaging uses include (i) electrical applications, as insulation or in batteries, (ii) displays, such as touch screens, (iii) photovoltaics (solar cells), (iv) durable media, such as labels and plastics cards and (v) in industrial applications such as adhesive tapes, medical test strips and safety window films.[111] Packaging film is used in among others packaging of food products, pharmaceutical and medical products, consumer products and industrial products. Packaging formats are pouches, bags, lidding and other packaging foils. Packaging film is mainly used for food packaging followed by pharmaceutical and medical packaging.[112]

In 2013, the global market for PET applied in films amounted to 5 million ton[113] with a value of US$8 billion,[114] of which high barrier (multilayer) film is the main application. High barrier packaging films are defined as flexible films that are smaller than 250µ in gauge with an oxygen gas transmission rate in the range <5cm³/m²/day (25µ films).

The market demand for low barrier film is estimated at 9,000 kta, for medium barrier at 1,214 kta and for high barrier at 546 kta.[115] The Company expects PEF to gain market share first in the medium barrier segment as the PEF properties benefits this packaging volume segment most and the Company believes that 85% of this volume in PEF is required to supply the same market demand.

Key technical requirements for the use of films for food packaging include the need to achieve a certain level of barrier protection against oxygen, CO_2 and/or water vapour using only a certain thickness of film which can be converted to the required packaging format. In some cases where it is deemed desirable for the consumer to see the product prior to consumption, transparency is also required.[116] Currently, pouches, bags and sachets are the most widely used packaging format for food. The trend towards packaging food in pouches is primarily driven by the need to reduce cost, not only material cost but also transport costs.[117] Love Child Organics, a Canadian baby food company claims their pouches use 80% less material than many alternative forms of packaging and when compared to the glass jars commonly used for baby food, their pouches can use as little as 8% of the energy.[118] PEF offers potential advantages over laminates currently used in pouches for food, which cover the following points:

- Typically pouches are multilayer films which have limited recyclability;[119]
- Multilayer films deliver high barrier properties;
- PEF's intrinsic high barrier properties may deliver a higher performing recyclable pouch material; and
- Increased shelf life without compromising on ingredients.

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105 PA consulting, report for Avantium, August 2016.
106 Www.naturalleader.com/wp-content/themes/natlead/images/UoN%20Food%20Loss%20Preliminary%20Report.pdf.
107 Www.kernpack.co.uk/packaging-blog/uk-ready-meal-food-trends/
108 Www.foodethicscouncil.org/uploads/publications/Snapshot(web)_0.pdf.
109 Www.flexpack.org/PDFs/Publications/Food_Waste_Report_McEwen.pdf.
110 Www.wifag-polytype.com/group/actual/news/newsdetail/article/wifag-polytype-and-avantium-announce-agreement-on-100-biobased-pef-for-thermoforming/.
111 AMI Consulting (2016): *Global BOPET film market overview*, www.amiplastics.com.
112 Www.marketsandmarkets.com/PressReleases/packaging-film.asp.
113 Nexant Petrochemical Market Dynamics Polyester & Intermediates December 2014.
114 At US$1,500 per ton PET.
115 PA consulting, (non-public) report for Avantium, July 2015 and Company's estimates.
116 PA consulting, (non-public) report for Avantium, August 2016.
117 PA consulting, (non-public) report for Avantium, August 2016.
118 Www.ovechildorganics.com/question/packaging-recyclable/.
119 Www.bestinpackaging.com/2013/07/28/flexible-packaging-and-its-recycling-problems/.

Particularly relevant for the film packaging market is the growth in the processed food industry, i.e. offering food that is convenient to have anytime, anywhere requiring convenient, easy-to-use and special lightweight packaging films.[120]

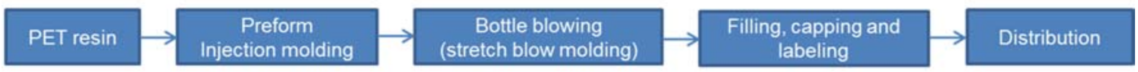
For reference, the following table provides the price per kilogram (kg) for certain barrier materials used in films and thermoformed trays:[121]

	Composition	Price €/kg	General application	Film thickness (µm)
1	Co extrusion of PA/EVOH (4%)/PA/PE	3.47	Baby food, meat, processed food (mayonnaise) and creams	70
2	Aluminium coated PET	4.03	Snack foods, coffee pack	12
3	Aluminium coated PET	5.91	Snack foods, coffee pack	23
4	Nylon//coextruded with EVOH/PE	2.2	Meat /processed meat (sausage, bacon), smoked fish, cereals, cheese and dairy products, semi-finished meals	90
5	MAPET II	2.93	trays for meat and poultry	500
6	PVdC multilayer clear co-extruded barrier film	3.95	Blister pack pharma industry	76.2

(1) EVOH (Ethylene vinyl alcohol) is a co-polymer. EVOH multilayer is used in a laminate structure for high oxygen barrier applications. Its barrier performance degrades if not protected from water vapour
(2) Metalised (aluminium) PET – a film used as a high-barrier material against water vapour and oxygen. It is widely used in snack packaging, pouches and other food products
(3) Nylon multilayer – a film used as a barrier against oxygen, but approximately 100 times less effective than EVOH. Like EVOH, it is susceptible to water vapour. It is typically used for cheese packaging because it does not allow oxygen into the package (which would spoil the cheese) but does allow carbon dioxide out (which, if trapped inside the package, would cause it to balloon).
(4) MAPET II – monoamorphous PET used for medium barrier transparent packaging applications, used for meats. MAPET trays and lids are single materials and can therefore be recycled
(5) PVdC (Polyvinylidene chloride) multilayer – a high barrier material for oxygen and water vapour. It is used for dry food packaging and pharmaceutical packaging.

12.3.3 Supply and value chain

The value chains for PET bottles, film and fibres are also applicable to PEF and PEF can be processed in the same assets as PET. The PET bottle supply chain for the production of PET bottles is illustrated below.

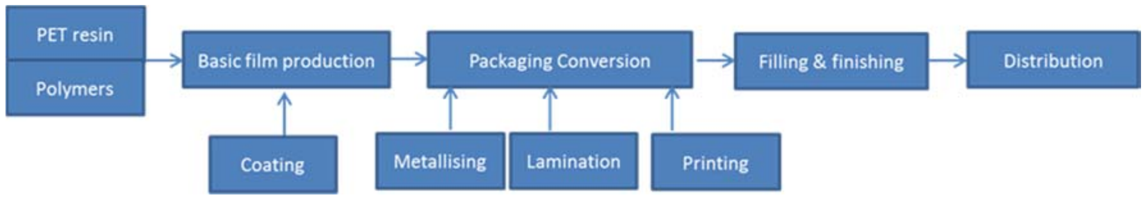


Graph (5) PET bottle supply chain

PET bottles are typically produced in a two-step process called ISBM (Injection Stretch Blow Molding): first the polymer resin is prepared and dried and subsequently the resin is extruded and injected into a mould to make preforms by converters such as ALPLA, Logoplaste or Graham Packaging. These preforms are then shipped to the bottlers to locally blow the bottles in so-called blow moulding equipment. Typically the bottles are filled and capped at the bottling company directly after blow moulding. In some cases (usually for smaller amounts) the converter also blows the bottle and supplies the finished bottle to the bottler for filling capping and labelling. PEF bottles have been produced on pilot scale using similar ISBM equipment.

The supply chain for the production of multi-layer films is illustrated below.

[120] Global Packaging Film Market 2015-2019.
[121] PA Consulting (non-public) report for Avantium, August 2016.



Graph (6) PET film supply chain

PET thin films are being produced in a biaxial orientation process. In such a process the PET resin is extruded and then stretched in the machine direction and subsequently in the transverse direction to create a thin, stable, and strong film. During the film stretching process the film may be coated with barrier materials. The film is subsequently supplied to a packaging converter which integrates the film in a multilayer laminate with printing layers, sealing layers, barrier layers, and possibly also metallisation. The rolls of multilayer film are then prepared into pouches or other packages to be filled by the producer. PEF films have been produced using pilot biaxial orientation lines, and will be tested in multilayer structures.

The supply chain for the production of PET filament yarn for textiles is illustrated below.

Graph (5) PET fibre supply chain

Polyester (PET) fibre production is usually integrated with PET polymerisation production which saves energy and transportation costs. Polyester is a "melt spun" fibre, which means that it is heated, extruded through the spinnerets, and cools upon hitting the air. From there it is loosely wound around cylinders for drawing. The fibres are then hot stretched until they are about five times their original length in order to decrease their width. The fibre is then wound onto cones as filaments or is crimped and then is cut into staple lengths. After the fibre itself is created, it is made into a yarn. There are two types of polyester yarns: filament and spun. Filament yarns are made by taking the long polyester filaments, grouping them together, and then twisting them to make them thicker and stronger. A monofilament yarn has just one, long polyester fibre that is not twisted. After the yarns are made, they are shipped out to textile mills to be woven into fabric.

Polyester is the generic name for PET which encompasses several fibre, bottle and film variations with different structures and shapes. Indorama, DAK and M&G are three of the major producers of polyester; each has several trademarked names.

12.3.4 Key trends

Key global trends in the beverages and food packaging industry are the following:

Sustainable sourcing of products and green label products

Sustainable sourcing of products and green label products are one of the major movements being pursued in the (food) packaging industry, driven by consumer preferences and regulation.

Consumers are raising environmental and sustainability concerns with brand owners, resulting in more emphasis being placed on sustainability and the use of resins derived from renewable resources.[122] Consumers increasingly show a preference for (food) products sold in biobased packaging[123] over (food) products that are sold in fossil-fuel based packaging as these are considered to be more sustainable (consume less energy and natural resources and generate lower CO_2 emissions), especially where there is no or very little price difference between the two.

A number of governments have already imposed or are imposing rules regarding the use of certain packaging materials aiming to reduce their use. For example, the City of San Francisco has prohibited food vendors to sell prepared food in disposable food service ware that contains polystyrene foam.[124] In the Netherlands, it is prohibited for shopkeepers to provide consumers with a free plastic bag.[125] Avantium expects that more such legislation will be introduced in the future, resulting in a decrease of the demand for materials based on fossil fuels and a subsequent increase of the demand for biobased materials.

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[122] Www.pwc.com/gx/en/forest-paper-packaging/pdf/sustainable-packaging-threat-opportunity.

[123] Www.smitherspira.com/news/2016/february/global-packaging-material-outlooks.

[124] Since 2006. Section 1603 sub (a) of San Francisco Food Service Waste Reduction Ordinance (www.sfgov.org/sfc/foodservice/ftp/uploadedfiles/fswr/documents_forms/FSWR_Ordinance295-06__.pdf).

[125] With effect from 1 January 2016.

Prepared fresh food

The growth area in the supermarket aisles is in fresh and chilled foods,[126] predicted to grow significantly over the next five years and to outperform the overall growth in supermarket sales displacing tinned and boxed foods from the shelves.

Retailers will be looking for ways to maximise their displays of chilled foods and reduce wastage in this high margin sector. Extending shelf life while maintaining quality is the sure-fire way of assuring a product ends up on enough people's shopping lists.[127]

This segment is dominated by retailers. For brand owners wanting to compete in the fresh food market, centralised production and longer supply chains are an obstacle to meet the shelf life requirements. High-end packaging, with specifically high barrier properties, is as such required.[128]

Food waste

Reducing food waste has become a major societal concern. According to the Food and Agriculture Organization of the United Nations, it is estimated that nearly one-third of food produced for human consumption is wasted globally, which is around 1.3 billion tons annually.[129] To reduce the amount of food that goes to waste, food producers are increasingly demanding innovative packaging solutions which maintain the product quality and increase the shelf life of their food products. Manufacturers are seeking better mechanical performance and higher thermal stability to increase stability of the products throughout the supply chain.

Brand building through packaging

Over the last few years, there has been a significant shift in the perception about packaging among consumers and the manufacturers of consumer goods. The importance of packaging has been increasing worldwide as consumers pay more and more attention to colours and design, ingredients used, and the convenience of carrying, using and easily disposing and recycling of packaging.

From a consumer goods manufacturer's point of view, packaging has become an essential tool for branding.[130] In today's highly competitive environment, creating shelf appeal and visibility is important for manufacturers. Brand owners focus on creative packaging to create brand awareness and to diversify their brands by selling their products in specific, custom made packaging.[131]

Portioning

Due to the increased awareness of obesity and associated health issues, consumers shift towards smaller packaging across segments. In bottles, particularly in the stagnant segments like CSD, the brand owners focus on introducing small packaging sizes.[132] Smaller serving in CSD and food requires enhanced barrier packaging to avoid reduced shelf life, due to the higher surface to volume ratio for these smaller packaging sizes.

In line with the wider carbonated soft drinks market, The Coca-Cola Company has seen increased profits in the sale of smaller volume packs, namely, 7.5-ounce mini-cans and smaller 8-ounce glass bottles, indicating that their health-conscious consumers want smaller servings.[133] Other CSD brand owners have been hoping that soda drinkers, looking to limit their caloric intake, will be willing to buy smaller cans and bottles even if they are pricier, and provide relief to soda sales that have been weak for years as people turn away from sugary soft drinks.[134]

Linked with the trend of controlling portion sizes is the growth of resealable packaging, which enable consumers to control the portion size of their meals and snacks. Instead of consuming a whole portion of pre-prepared food or snacks in one sitting, resealable packaging allow consumers to eat the food over a longer timeframe without worrying about mess or product degradation. Research suggests that consumers are actually willing to pay that little bit extra for the added functionality,[135] with 34% of people questioned said they would be prepared to pay a bit more for resealability. Means of enabling resealability have included grip and seal, zip lock and adhesive stickers.

Recycling

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126 Www.ift.org/food-technology/daily-news/2015/december/07/frozen-foods-growth-limited-by-demand-for-fresh.aspx
127 Www.wiley.com.au/wp-content/uploads/Article-Ready_meal_innovation_doubles_shelf_life.pdf.
128 Www.retailtimes.co.uk/growth-posh-ready-meals-shows-consumer-attitudes-behaviour-can-diverge-says-engage-research/.
129 Global Food Packaging Market 2014-2018.
130 Www.prsresearch.com/prs-insights/article/effective-packaging-an-essential-tool-for-success/.
131 Global Packaging Film Market 2015-2019 and other reports Technavio.
132 Www.forbes.com/sites/greatspeculations/2014/08/06/could-smaller-servings-boost-margins-for-coca-cola-and-pepsi-amid-soda-slowdown/#5239b04038ea).
133 Www.fortune.com/2015/07/22/coke-small-packages/.
134 PA consulting, non-public report for Avantium, August 2016.
135 Www.packagingnews.co.uk/consumeriq/getting-closure-resealability-in-packaging-consumer-iq-06-05-2013.

In the EU, 38% of waste goes to landfill.[136] Landfill rates have decreased in the EU since 1995 due to the Landfill Directive (2004/12/EC, amending Directive 1991/31/EC on the landfill of waste), which obliges Member States to reduce the amount of biodegradable waste in landfill by 65% by 2016 compared to 1995 levels.[137] Recycling offers one method of Member States to meeting their obligations arising from the Landfill Directive, with energy recovery processing being the alternative method. Furthermore, there exists specific legislation for the recycling of waste packaging in the EU pursuant to the Waste Packaging Directive (2013/2/EU, amending Directive 1994/62/EC on packaging and packaging waste), which sets an overall target for packaging waste recycling rates. The target can be met purely through bottle/rigid plastic recycling, which is a more developed industry than plastic film recycling. Recyclability of plastics is becoming increasingly important. The recycling rate for plastics is far below the global recycling rates for paper (58%) and iron and steel (70–90%). In packaging, only 14% of plastic is collected for recycling globally. When additional value losses in sorting and reprocessing are factored in, only 5% of material value is retained for a subsequent use. Plastics that do get recycled are mostly recycled into lower-value applications that are not again recyclable after use. In addition, plastic packaging is almost exclusively single-use, especially in business-to-consumer applications. PET used in beverage bottles has a modest but higher recycling rate than any other type of plastic.[138] PET bottles can be recycled to re-use the material for the production of new PET bottles, fibres and other products. Various resource protection programs and legislation are major drivers for the development and recycling of packaging materials.[139] Whilst they provide good barrier properties, laminates and multi-layered polymers have limited recyclability. Metalised pouches for instance are not currently recyclable.[140]

Clean labelling

Consumers are increasingly negative about processed foods and look for evidence of natural ingredients in products.[141] Consequently there is a trend for food producers to utilise “clean labels” on their products, where the ingredients reflect wholesomeness and “natural” credentials (i.e. no artificial ingredients). So-called “clean-label” product launches increased by 27% in 2013.[142] Clean labelled-food poses packaging challenges to manufacturers as many “artificial” ingredients such as antioxidants, sweeteners and hydrogenated fats provide preservative qualities. For instance antioxidants can extend shelf life by 10 to 20%.[143] If natural ingredient alternatives cannot be added, improved barrier properties of the packaging is an alternative method of maintaining shelf life. Multisorb Technologies Inc., an active packaging company, offer packaging with desiccants and oxygen scavengers to enable food producers to use natural ingredients without sacrificing shelf life.[144] For example, their active packaging prevent trace minerals from promoting oxidation of flavours, colour, oils, or other food ingredients without artificial antioxidants and enable the use of natural vegetable fats without fear of spoilage.[145]

Convenience

Convenience foods are driven heavily by the trend towards more convenient food preparation and consumption, which is a result of busy lifestyles and an aging population. Packaging is key in the development of new convenience products; foods need to be appealing with required nutritional value whilst also meeting consumer expectations in terms of ease of use, safety, variety and cost[146]. Smaller, lighter and more easily disposable packaging makes consumption-on-the-go easier.[147]

Lightweight

Over the past two decades the PET bottling industry has been successful in reducing the weight of PET bottles. This light-weighting effort was initiated in times when PET prices were very high, and was further intensified to reduce transportation costs and to trim environmental waste. It has resulted in reducing the weight of PET bottles with more than 40% in water bottles and 20% in CSD bottles. Over the past years it has become clear that the limits of this light-weighting effort have been reached, as it now starts to create more problems than it solves, such as bottles being too thin to survive the distribution requirements or the need to add oxygen scavengers to bottles to meet the gas barrier performance, creating contamination problems in the recycling stream.[148] Along with light weighting packaging, some producers have successfully concentrated their products, reducing the

136 Www.ec.europa.eu/eurostat/statistics-explained/index.php/Municipal_waste_statistics.
137 Www.wrap.org.uk/sites/files/wrap/Film%20reprocessing%20technologies%20and%20collection%20schemes.pdf.
138 Www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf.
139 Www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf.
140 Www.bestinpackaging.com/2013/07/28/flexible-packaging-and-its-recycling-problems/
141 Www.foodnavigator.com/Market-Trends/What-do-natural-and-clean-label-mean-anyway.
142 Www.annualreport2014.tateandlyle.com/strategic-report/speciality-food-ingredients/index.html.
143 Www.foodproductdesign.com/articles/1999/09/bar-talk.aspx.
144 Www.foodproductdesign.com/articles/1999/09/bar-talk.aspx.
145 Www.foodproductdesign.com/articles/1999/09/bar-talk.aspx.
146 PA consulting, (non-public) report for Avantium, August 2016.
147 Www.smitherspira.com/news/2013/september/five-consumer-packaging-industry-trends.
148 Www.canplastics.com/features/pet-bottles-pushing-the-boundaries-of-lightweighting/.

overall mass of the product without adversely affecting portion/dose sizes. Concentrated products often require packaging with enhanced features or added functionality.[149]

In conclusion, Avantium believes that these global trends will lead to an increased demand for high performance, sustainable and recyclable plastics, to the detriment of petroleum based plastics, glass, carton and aluminium. PEF is a sustainable plastic packaging material. It has better barrier properties offering longer shelf-life opportunities reducing food waste, limit the need to use preservatives due to better oxygen barrier properties[150] and enabling smaller portioning. PEF is transparent and can be shaped in dedicated designs to the particular wishes of brand owners. In addition, PEF is fully recyclable, using the (PET) recycling infrastructure, assets and outlets.

12.4 Fibres

Initially, the focus will be on launching PEF in bottle and film applications. In the long term, Avantium also expects to be able to develop PEF fibre applications. Currently 50% of PET, approximately 30 million ton per year, is used for fibres, representing a US$45 billion market,[151] with a projected CAGR of 6% for the period 2014-2019.[152] PET fibre is the largest synthetic fibre in the world, with a 77% market share in the synthetic fibre market worldwide.[153] The PET fibres market can be segmented in carpets, apparel (polyester), furnishing, car tire cords, industrial fibres and non-woven articles (wipes and medical applications). Industrial polyester fibres, yarns and ropes are used in fabrics for e.g. conveyor belts and safety belts.[154] Each application has distinct criteria for the performance of the fibre, such as tensile strength, crimp properties, moisture uptake, resilience, abrasion and wrinkle resistance. PET has become the dominant fibre *vis-à-vis* cotton fibre. Their relative market shares are affected by production costs, raw material costs, as well as consumer preference. Cotton is debated because of its bad social (a.o. child labour, underpayment) and environmental footprint (a.o. water and pesticide usage).[155]

12.5 FDCA outlets

FDCA, listed by the US Department of Energy as the number 2 in top-12 value added chemicals from biomass for establishing the “green” chemical industry of the future,[156] has significant additional market potential besides the PEF bottle, film and fiber applications, due to the large number of applications for which FDCA can be used as a substitute for:[157]

- Polyamides: representing a US$35 billion market in 2015 and an estimated addressable market for 2020 of US$44 billion[158])
- Poly-urethanes: and polyurethanes (US$48 billion market in 2014[159]) as well as thermosets or resins
- Chemical building blocks: FDCA can be used for chemical applications, such as a replacement of bisphenol A (US$14 billion market in 2013[160]) in plasticisers, solvents or as a precursor for making chemical intermediates such as adipic acid (US$5 billion market in 2013[161]) and phthalic anhydride[162] (US$7 billion in 2013[163]).
- Other Polyesters: FDCA can replace PTA as a building block for making a range of polymers such as new polyesters (including PEF, PBF, PTF), co-polyesters (including PEIF), and polyester polyols, Applications for these polyesters include fiber optics cable coatings, engineering plastics for automotive and medical applications.

12.6 Renewable chemicals industry

The renewable chemicals industry focusses on the transition from fossil-based to biobased chemicals, as discussed in section 11.1 “Transition from fossil-based to renewable chemistry” above.

Biomass offers a sustainable and practical source of carbon for human’s chemical and material needs. For the transition from petroleum to biomass as the carbon feedstock for the chemical industry, new efficient

149 PA consulting, (non-public) report for Avantium, August 2016.
150 www.ncbi.nlm.nih.gov/pmc/articles/PMC4375217/ and www.fao.org/docrep/005/y2515e/y2515e09.htm.
151 At US$1,500 per ton PET. Www.fibersource.com/f-info/FiberProduction.pdf.
152 IHS Chemical Economics Handbook PET Polymer, May 2015.
153 Www.fibersource.com/f-info/FiberProduction.pdf.
154 PA Consulting 2015 (non-public) reports for Avantium, 2015.
155 Www.solidaridadnetwork.org/sites/solidaridadnetwork.org/files/publications/Mind%20the%20Gap%20-%20Towards%20a%20more%20Sustainable%20Cotton%20Market.pdf.
156 Www.nrel.gov/docs/fy04osti/35523.pdf.
157 Www.nrel.gov/docs/fy04osti/35523.pdf.
158 Www.marketsandmarkets.com/PressReleases/global-nylon.asp.
159 Www.transparencymarketresearch.com/pressrelease/polyols-market.htm.
160 Www.globenewswire.com/news-release/2014/11/12/682387/10107790/en/Global-Bisphenol-A-BPA-Market-Demand-Is-Expected-To-Grow-At-CAGR-of-4-7-From-2014.
161 Www.grandviewresearch.com/industry-analysis/adipic-acid-market.
162 Www.bioconsept.eu/wp-content/uploads/BioConSepT_Market-potential-for-selected-platform-chemicals_report1.pdf.

technologies are required to convert renewable resources into safe products that can ideally be recycled.[164] In 2014, the worldwide production capacity for biobased polymers was 5.7 million tonnes, representing a 2% market share of the global plastics industry, and is expected to triple to nearly 17 million tonnes in 2020.[165]

12.6.1 Industry-wide strategies

The renewable chemical industry can be characterised using the two following innovation strategies:

The drop-in product strategy

This strategy is to produce a chemically identical product from renewable feedstock instead of fossil feedstock, targeting existing markets and applications. Because the drop-in product is chemically identical, it can be adopted rapidly and with limited qualification testing. Furthermore, it can be processed in existing downstream assets and used in existing supply chains. Given that there is no performance differentiation, the drop-in product has to compete on price with the fossil-based equivalent. Commercialisation of the drop-in product depends on a "green premium" as long as it is not produced cost-competitively. A green premium is the additional price someone is willing to pay for the additional emotional performance and/or strategic performance of the intermediate or end-product the buyer expects to get when choosing the biobased alternative compared to the price of the conventional counterpart with the same technical performance.[166] A green premium depends on the process technology, production scale and feedstock prices.

Existing renewable chemistry products that have been developed based on the drop-in approach include (i) biobased MEG produced by Indian Glycol and Greencol Taiwan Corporation, (ii) biobased succinic acid produced by BioAmber, Succinity (a joint venture between Corbion and BASF) and Reverdia (a joint-venture between DSM and Roquette), (iii) biobased epichlorohydrin produced by Solvay, (iv) bioethylene based on ethanol produced by Braskem and (v) n-butanol produced by GreenBiologics.

Project Mekong, Project Zambezi and Project Volta all employ the drop-in strategy.

The new molecule strategy

This strategy is to produce a new product on the basis of renewable feedstock with specific product properties that are attractive for end-users, for example barrier properties and bio-degradability. Such properties may justify a higher price compared to fossil-based products. In addition, new markets and applications may have to be developed which may be time and cost consuming and may require the support of different parties in the supply chain.

Existing renewable chemistry products that have been developed based on the new molecule approach include (i) PLA (poly-lactic-acid) produced by NatureWorks (a joint-venture between Cargill and PTT Global Chemical) and Corbion, (ii) PDO (propane-diol) produced by a joint –venture between DuPont and Tate & Lyle and (iii) the conversion of furfural into furfuryl alcohol by TransFurans Chemicals.

The YXY Technology developed by Avantium to make FDCA and PEF is based on the new molecule strategy.

12.6.2 Biobased feedstock

Production of most renewable chemistry products requires the supply of renewable carbohydrates from biomass feedstock. In 2011, globally about 11 billion ton of biomass was harvested, consisting for 40% of harvested agricultural biomass, 31% of grazed biomass, 18% of wood and 12% of harvest residues. The main ingredients in this biomass include cellulose, hemicellulose, sugar/starch, lignin, protein, oils and fats. Harvested biomass is used for 58% for feed, 16% for bio energy generation, 14% for food, 10% for materials and 1% for biofuels.[167] Today ca. 1.4 billion of hectares of arable land are globally used for the supply of biomass.[168]

Of the harvested agricultural biomass, corn (1.3 billion ton per year) and wheat (730 million ton per year) are the primary crops for the production of carbohydrates such as glucose and fructose. The main uses of corn are animal feed (58%), food (15%) and industrial applications (25%) such as the production of bioethanol.[169] Wheat consumption is dominated by human consumption (68%), followed by animal feed (including wheat based vital gluten as fish feed) and industrial applications. Sugar (sucrose) is the third largest source of carbohydrates, produced at 180 million ton per year[170] from sugar cane and sugar beet.

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164 Foreword of The Role of Green Chemistry in Biomass Processing and Conversion, by Haibo Xie.
165 Nova-Institut GmbH (2015): *Bio-based building blocks and polymers in the World.* Capacities, Production and Applications: Status Quo and Trends towards 2020.
166 Nova Institute: Nova-Institute #3 on biobased economy 2014-05: *Green Premium Prices Along the Value Chain of Biobased Products.*
167 Nova Institute: Nova- institute #7 on biobased economy 2015-10: *Global Bioeconomy in the conflict between biomass supply and demand.*
168 Nova Institute: Nova- institute #2 on biobased economy 2013-7: *food or non-food, which agricultural feedstocks are best for industrial uses?*
169 FAO Food outlook, biannual report, June 2016: /www.fao.org/3/a-i5703e.pdf, page 20.
170 Www.sucden.com/statistics/1_world-sugar-production.

The main important industrial use of carbohydrates is the production of bioethanol, accounting for 94% of the industrial demand.[171] Bioethanol is a biofuel that can be blended with gasoline. The largest bioethanol producing and consuming countries are Brazil (sugar cane based bioethanol) and the United States (corn based bioethanol).

Fructose is a carbohydrate that is made from corn or wheat starch. It is mainly used as a sweetener for beverages and food and has replaced sucrose in certain geographical markets such as the United States, which is currently the largest fructose market.[172] In the United States, corn is the main feedstock for fructose syrups. In the year 2015, the production of high fructose corn syrup (**HFCS**) was 8.5 million ton, accounting for approximately 6% of the total corn production in the United States.[173] In Europe also sucrose has been used as feedstock for fructose syrups. The YXY Technology Reference Plant will most likely use corn or wheat based fructose as feedstock.

12.6.3 Key trends

The biobased feedstock market is driven by a number of key trends:

Expiration of the European sucrose and fructose quota system

In Europe sugar is used as the main sweetener for beverages and foods. The production of fructose syrup in Europe is currently regulated and capped at 0.7 million ton per year, representing 5% of the sweetener market;[174] sugar production is capped at 13.5 million ton. Production in excess of the quota is known as "out-of-quota" sugar and strict rules govern its use. It can be exported up to the EU's annual World Trade Organisation (WTO) limit of 1.4 million ton, sold for biofuel or other industrial non-food uses, or counted against the following year's "quota" sugar. If there are signs that there will be an excess of sugar on the European market, a decision can be taken to withdraw some quantities. If, on the other hand, there is a shortage, measures can be taken to increase supplies. In 2017, this sucrose and fructose quota system will expire with the intension to boost European production, export and job creation.[175] The European Commission expects lower sugar and fructose prices and the production of fructose to triple to more than 2 million ton per year. [176]

Concerns regarding non-food biomass applications

A distinction can be made between 1G and 2G feedstock. For 1G feedstock, the source of carbohydrates is sugar, lipid or starch directly extracted from a plant. The crop is actually or potentially considered to be in competition with food. For 2G feedstock, the carbohydrate is derived from cellulose, hemicellulose, lignin or pectin sourced from e.g. agricultural, forestry waste or purpose-grown non-food feedstock (e.g. short rotation coppice, energy grasses).[177]

There is a growing concern[178] regarding the use of agricultural land and 1G feedstock for non-food purposes such as producing biobased plastics and biofuels (e.g. corn ethanol and palm oil based biodiesel) as this has a significant impact on world crop prices.[179] In certain jurisdictions (e.g. China), regulations have been introduced to restrict the use of land and 1G feedstock for non-food purposes.[180] This concern could influence brand owners and consumers in their demand for 2G feedstock based products.

According to estimates from European Bioplastics, the amount of land devoted to supplying bioplastic feedstock totalled 0.6 million hectares in 2013, or 0.01% of global agricultural land.[181]

In order to avoid competition with food chains, industry and academia have undertaken initiatives with the objective to use non-edible biomass as feedstock for making fuels and chemicals. This is also known as a biorefinery concept where (ligno-cellulosic) biomass in the form of wood chips or agricultural waste is deconstructed and refined to 2G sugars and a by-product lignin. Most efforts are focused on the production of cellulosic ethanol for its use in biofuels, while burning the lignin for the generation of electricity and steam. This is demonstrated by a number of high-profile large-scale plants for making cellulosic ethanol from agricultural waste that commenced production over the past few years, including the Beta Renewables industrial plant in Crescentino, Italy, the DSM-POET “Project Liberty” plant in Emmetsburg, Iowa, United States, and the DuPont plant in Nevada, Iowa, United States. The quality of the 2G sugars of these plants is insufficient for the

[171] Deloitte report Opportunities for the fermentation-based chemical industry – September 2014.
[172] Www.cornnaturally.com/pdf/hfcs-in-the-us.pdf.
[173] Www.ers.usda.gov/topics/crops/sugar-sweeteners/background.aspx#hfcs.
[174] Www.ec.europa.eu/agriculture/sugar/index_en.htm.
[175] Www.ftm.nl/upload/content/files/CIUS%20open%20letter%20to%20European%20Leaders.pdf.
[176] Www.ec.europa.eu/health/nutrition_physical_activity/docs/ev_20150218_co5_en.pdf.
[177] Www.biofuelstp.eu/advancedbiofuels.htm.
[178] Www.biofuelstp.eu/food-vs-fuel.html.
[179] Www.wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2008/07/28/000020439_20080728103002/Rendered/PDF/WP4682.pdf.
[180] USDA 2015: China biofuel industry faces uncertain future. www.gain.fas.usda.gov/Recent%20GAIN%20Publications/Biofuels%20Annual_Beijing_China%20-%20Peoples%20Republic%20of_9-3-2015.pdf.
[181] Nova-Institut GmbH (2013): *Bio-based Polymers in the World Capacities, Production and Applications: Status Quo and Trends towards 2020*; European Bioplastics (2013): Bioplastics facts and figures.

production of biobased chemicals and plastics. Fuels are less demanding, but biochemicals production needs high purity glucose.[182] Outside of cellulosic ethanol there are currently no industrial-scale plants on stream that produce cellulosic sugars (such as glucose) meeting the requirements for the production of biobased chemicals.[183] This creates an opportunity for Avantium's Zambezi technology for producing high-quality glucose from 2G feedstock.

Increasing health concerns of excessive sugar consumption

There is strong scientific consensus that the over-consumption of added sugar including high-fructose corn syrup is a major health problem.[184] Consuming added sugars, especially in the form of soft drinks, is linked to amongst others obesity.[185] Since 2000, in the United States, production of HFCS has declined with approximately 10%, representing 1 million ton.[186] This decline may be related to increasing health concerns and the switch of consumers to alternative sweeteners and smaller portions.[187] Due to this decline there is a strong interest to find alternative applications for fructose, including the use of fructose for industrial applications, such as the production of biobased chemicals and bioplastics.

12.7 Catalyst market

Catalysts are one of the most important areas of chemical industry, where increasing investment in research and development is observed even during the economic slowdown. A catalyst is defined as a substance that will change the rate of a chemical reaction without itself being consumed in the reaction. By accelerating chemical reactions, catalysts are essential to making many chemical processes industrially and commercially viable. Without the catalyst, reactions would be too slow or non-selective and insufficiently convert feed into desired product to make the process economically possible. Although the catalyst itself is not affected by the intended chemical reaction, catalysts degrade over time due to the effects of side-reactions, impurities in the feed, or the physical conditions of the process (for example, temperature, pressure or mechanical wear and tear). Therefore, catalytic chemical processes require that the catalyst is replaced with a new catalyst over time, resulting in continuous market demand for catalysts.

The catalyst market is conventionally segmented into five types of processes in which the catalysts are applied: (i) petroleum refining, (ii) petrochemical, (iii) fine chemical, (iv) polymer and (v) environmental processes.[188] The Company is currently developing and optimising catalysts in the segments petroleum refining and petrochemical.

Each year, petroleum refinery and chemical companies invest in the development of novel catalysts and catalytic processes, as well as for improving existing catalysts, in order to increase the yield and/or selectivity of the catalyst, to reduce energy consumption and/or to enhance the catalyst life time. Such investments are also driven by the need for innovation and to develop novel, differentiating and better products and processes and the need to meet government regulations for emissions and/or environmental protection. Rising demand for clean fuels is one of the most important driving factors for the catalyst market in refineries.[189] Also changes in the nature or quality of the feedstock require adaptation of the catalyst system or process conditions. Such changes could be, for example, switching from light to more heavy grades of petroleum from unconventional petroleum sources, or the use of shale gas as feedstock for chemical products or fuels. The performance of the catalyst system is often so important to petroleum refinery and chemical companies that catalysis R&D is considered to be of strategic importance, which can be a factor in deciding to outsource R&D activities.

The global catalyst market is, with a CAGR of 3.5% from 2016 to 2024 expected to reach US$34 billion per year by 2024.[190] The Company believes today the total catalyst R&D expenditures are approximately US$ 1 billion, around 4% of the market value, which primarily (>80%) constitutes in-house R&D. The Company believes the Catalysis R&D market to grow faster than 3.5% via for example increased outsourcing of R&D and as companies heavily focused on R&D are growing significantly faster than those that are not.[191]

12.7.1 Key trends

A number of key trends are expected to drive the catalyst industry:

Valorisation of petroleum and gas at the source

Industrial companies in the petroleum, natural gas, refinery and chemicals industries in the Middle East, China and India are developing their own technology by investing in equipment, research centres and education. In the

[182] US Department of Energy (2015): *Lignocellulosic Biomass for Advanced Biofuels and Bioproducts*: www.genomicscience.energy.gov/biofuels/lignocellulose/.
[183] European Biofuels Technology Platform: www.biofuelstp.eu/cellulosic-ethanol.html#liberty.
[184] Www.ec.europa.eu/health/nutrition_physical_activity/docs/ev_20150218_co5_en.pdf.
[185] Www.ajcn.nutrition.org/content/79/4/537.full.
[186] Www.ers.usda.gov/topics/crops/sugar-sweeteners/background.aspx.
[187] Www.ec.europa.eu/health/nutrition_physical_activity/docs/ev_20150218_co5_en.pdf.
[188] Industrial Organic Chemicals, Wittcoff, Reuben and Plotkin, 2004.
[189] Www.psmarketresearch.com/market-analysis/catalyst-market.
[190] Www.energyglobal.com/downstream/refining/09062016/Catalyst-market-to-reach-US343-billion-by-2024-3488/.
[191] Www.prnewswire.com/news-releases/global-markets-for-catalysts-focus-on-catalyst-regeneration-300111201.html.

Middle East, the focus is on valorising petroleum and gas, whereas in China and India, the aim is to develop technologies that are less dependent on Western companies. In Europe and North America, traditional technology providers are focused to benefit from growing demand in emerging markets and more stringent emission laws. These companies invest in innovation to stay ahead of new technology providers in those emerging markets.

Feedstock diversification

Petroleum and refinery companies are continuously trying to upgrade "bottom of the barrel" products, such as resid (the heaviest fraction of petroleum). To work with the heavier petroleum fractions, further investments in catalytic processes are required. Another element is the increased activity in the natural gas sector. In this respect, there is an increased effort in exploring gas reserves. For example, in the United States, the natural gas industry has gone through a period of major investments in shale gas due to the availability of new drilling technologies (so-called "fracking"). This has resulted in a massive increase in the output and availability of natural gas. The availability of cheap natural gas has caused a strong interest in developing new chemical processes to use natural gas as feedstock for making chemical products and fuels, with a strong interest in developing novel catalyst that make these products economically viable and competitive versus other petrochemical processes.

More stringent legislation

Legislation on fuels for vehicles, trucks, marine and aviation is becoming ever more stringent. For example, in 2009 the European Union issued a directive for sulphur-free fuels.[192] EU legislation also requires a reduction of the greenhouse gas intensity of the fuels used in vehicles by 6% by 2020.[193] New catalysts will have to be developed to meet these changing demands.

[192] Www.eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0030.

[193] Www.ec.europa.eu/clima/policies/transport/fuel/index_en.htm.

13 MANAGEMENT, SUPERVISORY BOARD, SENIOR MANAGEMENT AND EMPLOYEES

This Chapter summarises certain information concerning the Management Board, the Supervisory Board and Senior Management (as defined below) as well as the management board and the supervisory board of the Joint Venture. Among other things, it summarises, but does not purport to give a complete overview and should be read in conjunction with, and is qualified in its entirety by reference to, the Articles of Association, the Management Board Regulations (as defined below) and the Supervisory Board Regulations (as defined below) as they will read after the Conversion, in conjunction with the relevant provisions under Dutch corporate law.

13.1 Management structure

The Company has a two-tier board structure consisting of the Management Board and the Supervisory Board. The Management Board is the statutory executive body (*raad van bestuur*) and is, together with the senior management of Avantium (**Senior Management**, and together with the Management Board, the **Management Team**) responsible for the day-to-day management of the Company, which includes, among other things, formulating the Company's strategies and policies and setting and achieving the Company's objectives. The Supervisory Board (*raad van commissarissen*) supervises and advises the Management Board.

13.2 Management Board

Powers, responsibilities and function

The Management Board is responsible for the management of the Company's operations, as well as the operations of the Group, subject to the supervision of the Supervisory Board. The Management Board's responsibilities include, among other things, the day-to-day management of the Company's operations. The members of the Management Board may divide its duties among its members in the Management Board Regulations. The Management Board shall timely provide the Supervisory Board with all information required for the exercise of its duties.

The Management Board may perform all acts necessary or useful for achieving the Company's objectives, with the exception of those acts that are prohibited or expressly attributed to the General Meeting or Supervisory Board by law or by the Articles of Association. In performing its duties, the Management Board is required to be guided by the interests of the Company and the Group, taking into consideration the interests of the Company's stakeholders (which includes the Shareholders and the Company's creditors, employees and clients) as well as the corporate social responsibility issues that are relevant to the business. The Management Board must submit certain important decisions to the Supervisory Board or the General Meeting for approval, as more fully described below under "Management Board decisions". The lack of such approval, however, does not affect the authority of the Management Board or its members to represent the Company.

Subject to certain statutory exceptions, the Management Board as a whole is authorised to represent the Company. In addition, each member of the Management Board may solely represent the Company. Pursuant to the Articles of Association, the Management Board is authorised, without prejudice to its responsibility, to appoint attorneys (*procuratiehouders*) who are authorised to represent the Company within the limits of their delegation

Pursuant to the Articles of Association, the Management Board may, subject to the approval of the Supervisory Board, establish one or more sets of regulations dealing with such matters as its internal organisation, the manner in which decisions are taken and any other matters concerning the Management Board (the **Management Board Regulations**). The Management Board Regulations will be placed on the Company's website as of Settlement and will apply in addition to the relevant provisions of the Articles of Association.

Composition

At the date of this Prospectus, the Management Board is composed of the following two members:

Name	Date of birth	Position	Member as of	Scheduled for re-election
T.B. Van Aken	19 October 1970	CEO	17 February 2006	At the general meeting in 2021
F.C.H. Roerink	14 June 1969	CFO	11 May 2007	At the general meeting in 2021

Mr. T.B. Van Aken has been Chief Executive Officer of the Company (**CEO**) since February 2006 (effective as of December 2005). In 2002, he joined the Company as Vice President of Business Development. In March 2004, he became Vice President of Global Marketing & Sales and a member of the Management Board, followed by his appointment as CEO per December 2005.

Before joining the Group, Mr. Van Aken held numerous commercial positions at DSM in the Netherlands and in New Jersey, United States.

Mr. Van Aken holds a master's degree in chemistry from Utrecht University.

Mr. F.C.H. Roerink has been Chief Financial Officer (**CFO**) of Avantium since February 2007.

Before joining the Group in 2007, Mr. Roerink worked for more than thirteen years at Unilever in various finance and accounting positions, in the Netherlands, in New Jersey, United States and in London, United Kingdom.

Mr. Roerink holds a master's degree in econometrics from the University of Amsterdam and a post-graduate degree Finance & Control from the University of Maastricht.

The Company's registered address (Zekeringstraat 29, 1014 BV Amsterdam, the Netherlands) serves as the business address for all members of the Management Board.

Appointment, suspension and removal

The Articles of Association provide that the Management Board shall consist of at least two members. The General Meeting appoints the members of the Management Board as described below. Each Management Board member shall be appointed or re-appointed for a period of not more than 4 years.

If a member of the Management Board is to be appointed, the Supervisory Board shall make a binding nomination of at least the number of persons prescribed by law. The General Meeting may at all times overrule the binding nomination by a majority of at least two thirds of the votes cast representing more than half of the issued capital of the Company. If the General Meeting overrules the binding nomination, the Supervisory Board may make a new binding nomination. The nomination shall be included in the notice of the General Meeting at which the appointment shall be considered. If a nomination has not been made or has not been made in due time, this shall be stated in the notice and the General Meeting shall be free to appoint a member of the Management Board at its discretion by a simple majority representing at least one-third of the issued capital of the Company.

The General Meeting may at any time dismiss or suspend any member of the Management Board. If the Supervisory Board proposes the dismissal or suspension of a Management Board member to the General Meeting, the General Meeting can resolve upon such dismissal or suspension by a resolution adopted by a simple majority of the votes cast. If the Supervisory Board has not made a proposal for the dismissal or suspension of a Management Board member, the General Meeting can only resolve upon the dismissal or suspension of such Management Board member by a resolution adopted by a majority of at least two thirds of the votes cast representing more than half of the issued capital. A Management Board member may also be suspended by the Supervisory Board. A suspension may be discontinued at any time by the General Meeting.

If either the General Meeting or the Supervisory Board has suspended a member of the Management Board, the General Meeting is required within three months after the suspension has taken effect to resolve either to dismiss such member, or to terminate or continue the suspension, failing which the suspension shall lapse. A resolution to continue the suspension may be adopted only once and in such event the suspension may be continued for a maximum period of three months.

Management Board decisions

Pursuant to the Management Board Regulations, the Management Board may in principle pass resolutions only if at least the majority of the Management Board members are present. The CEO may depart from this principle with respect to decision making in urgent situations. Management Board resolutions may at all times be adopted outside of a meeting, in writing or otherwise, provided that the proposal concerned is submitted to all Management Board members then in office and none of them objects to this manner of adopting resolutions. Where possible, resolutions shall be passed by unanimous vote. If this is not possible, the resolution shall be taken by a majority of votes. If there is a tie vote, the decision shall be taken by the Supervisory Board.

Pursuant to Dutch law and the Articles of Association, the Management Board must obtain the approval of the General Meeting for resolutions regarding an important change of identity or character of the Company or its business. This includes in any event: (i) the transfer of all or substantially all business activities of the Company to a third party, (ii) the conclusion or cancellation of any long-lasting cooperation by the Company or a subsidiary with another legal entity or company or as a fully liable general partner of a limited partnership or a general partnership, provided that such cooperation or the cancellation thereof is of essential importance to the Company and (iii) the acquisition or disposal by the Company or a subsidiary of a participating interest in the capital of a company with a value of at least one-third of the sum of the assets according to the consolidated balance sheet of the Company's most recently adopted financial statements with explanatory notes thereto.

The Management Board must obtain the approval of the Supervisory Board for various resolutions listed in the Management Board Regulations including: (i) entering into agreements, whereby the Company is granted credit by a bank, (ii) lending and borrowing money, with the exception of acquiring money under a credit already granted to the Company by a bank, (iii) long term direct or indirect cooperation with another company and the termination of such cooperation, (iv) investments and divestitures, (v) entering into agreements by which the Company binds itself as guarantor or as severally liable co debtor, or otherwise guarantees or agrees to bind itself as security for a debt of a third party, (vi) making settlements, (vii) being a party to legal proceedings, including conducting arbitration, with the exception of taking legal measures that cannot be delayed, (viii) entering into and changing employment agreements, whereby remuneration is granted, which exceeds the annual maximum amount determined by the Supervisory Board and notified to the Management Board in writing, (ix) establishing pension plans and granting pension rights in excess of those arising from existing arrangements, (x) adoption and amendment of the strategy of the enterprise and the business plan, (xi) adoption of the annual budget and (xii) adoption of employee stock-option plans.

The Supervisory Board may determine that such resolution does not require its approval if the amount involved does not exceed a value fixed by the Supervisory Board and notified to the Management Board in writing.

Pursuant to the Management Board Regulations, each member of the Management Board is required to immediately report any (potential) conflict of interest to the chairman of the Supervisory Board and the other members of the Management Board. The chairman of the Supervisory Board must determine whether a reported (potential) conflict of interest qualifies as a conflict interest within the meaning of Section 2:129 DCC to which the following applies.

A member of the Management Board may not participate in the adoption of resolutions (including any deliberations) if he or she has a direct or indirect personal interest conflicting with the interests of the Company and the business connected therewith. If all members of the Management Board have a conflicting personal interest, the resolution concerned will be adopted by the Supervisory Board. If a member of the Management Board does not comply with the provisions on conflicts of interest, the resolution concerned is subject to nullification (*vernietigbaar*) and this member may be held liable towards the Company.

All transactions in which there are conflicts of interest with members of the Management Board must be agreed on terms that are customary in the sector in which the Company operates and must be approved by the Supervisory Board.

13.3 Supervisory Board

Powers, responsibilities and function

The Supervisory Board supervises the management of the Management Board and the general course of affairs in the Company and the business connected with it. The Supervisory Board shall assist the Management Board by giving advice. In performing their duties the Supervisory Board members shall act in accordance with the interests of the Company and the Group, taking into consideration the interests of the Company's stakeholders (including the Shareholders and the Company's creditors, employees and clients) as well as the corporate social responsibility issues that are relevant to the business.

If the General Meeting has not already done so, the Supervisory Board is obliged to appoint an accountant to audit and report on and issue a statement concerning the annual financial statements of the Company. If the Supervisory Board fails to make such an appointment, due to absence or otherwise, the Management Board is authorised to do so.

Pursuant to the Articles of Association, the Supervisory Board may establish one or more sets of regulations dealing with such matters as its internal organisation, the manner in which decisions are taken and any other matters concerning the Supervisory Board (the **Supervisory Board Regulations**). The Supervisory Board Regulations will be placed on the Company's website as of Settlement and will apply in addition to the relevant provisions of the Articles of Association.

Composition

Upon Settlement, the Supervisory Board shall be composed of the following five members:

Name	**Date of birth**	**Member as of**	**Scheduled for re-election**
A.M. Boersma	26 April 1947	1 January 2017	At the general meeting in 2018
J.M. van der Eijk[194]	23 November 1953	1 January 2010	At the general meeting in 2018
D.J. Lucquin	13 January 1957	19 May 2011	At the general meeting in 2018
G.E.A. Reijnen	20 December 1967	14 April 2015	At the general meeting in 2019
C.J. Stoufs	5 November 1950	29 October 2008	At the general meeting in 2018
J.S. Wolfson	31 January 1971	15 January 2013	At the general meeting in

[194] Mr. J.M. van der Eijk temporarily replaces Mr. A.M. Boersma as acting chairman of the Supervisory Board due to health reasons.

Mr. A.M. Boersma (chairman) joined the Supervisory Board of the Company as per 1 January 2017.

Mr. Boersma held *inter alia* positions as non-executive director of Neste Oyj (2007 – 2014), chairman of the board of Prometheus Energy (2009 – 2015), chairman of the supervisory board of VieCuri Medical Centre for Noord Limburg (2010 – 2015), chairman of the supervisory board of ProRail (2010 – 2014), chairman of the supervisory board of KEMA (2010 – 2012) and independent non-executive director of Electrica (2014 – 2016).

His current significant positions outside the Group include Distinguished Professor Governance of (former) utility companies at TIAS School for Business and Society at Universiteit Tilburg, chairman of the supervisory board of PostNL, chairman of the supervisory board of TMG, member of the Foundation Beschermingspreferente Aandelen Fugro, chairman of the advisory committee Limburg Energy Fonds, member of the board of the Foundation Royal HaskoningDHV, chairman of the supervisory board of TKI BioBased Economy, independent non-executive member of the board of NUNAS AB, senior advisor to the First State European Diversified Infrastructure Fund and member of the council of DNV GL.

Mr. Boersma holds a doctorate degree Technical Sciences and a degree in Chemical Engineering from the Technische Universiteit Eindhoven.

Mr. J.M. van der Eijk (vice-chairman) joined the Supervisory Board of the Company in January 2010.

Mr. Van der Eijk started his career as a research scientist for Shell in 1980 and worked for Shell for 29 years in various positions, including Business Strategist, Technology Manager and Chief Technology Officer.

His current important positions outside the Group include: member of the supervisory board of the Joint Venture, member of the Board of Arundo Inc.,member of the supervisory board of the University of Utrecht and member of the supervisory board of Havenbedrijf Moerdijk N.V.

Mr. van der Eijk holds a PhD in Chemistry from the University of Utrecht.

Mr. D.J. Lucquin joined the Supervisory Board of the Company in May 2011. Mr. Lucquin’s appointment in the Supervisory Board has been renewed for a period of four years, provided that this period shall end immediately after the annual General Meeting in 2018 in order to ensure a smooth transition following the Conversion.

Mr. Lucquin worked at the Institut National de la Recherche Agronomique from 1986 – 1989. In 1989, he joined, Crédit Lyonnais. Mr. Lucquin joined Sofinnova Partners in 1991 and became a Managing Partner in 1998 and Chairman in 2007 until January 2017.

Mr. Lucquin currently serves as a representative of or member of the Board of Directors of Noxxon Pharma AG, Green Biologics Ltd, Enobraq SAS, By Design Ltd and as Managing Partner of Sofinnova Partners. In the period 2002-2013 and 2005-2015 he served as a board representative of Sofinnova Partners SAS for Ablynx N.V. respectively Cerenis Therapeutics SA. In the period 2009 – 2013 he was a director of BioAmber Inc.

Mr. Lucquin is a graduate in engineering from École Polytechnique and École du Génie Rural des Eaux et Forêts. He also has a degree in Innovation Management from the Unversité de Paris-Dauphine.

Ms. G.E.A. Reijnen joined the Supervisory Board of the Company in April 2015.

Ms. Reijnen started her career with ABN AMRO Bank N.V. in 1992 in various positions within corporate and investment banking where she became Managing Director and Head of Corporate Wholesale Clients Netherlands in 2007. Ms. Reijnen worked at The Royal Bank of Scotland N.V. from 2007 – 2012 as member of the Management Team RBS Netherlands and Head of Corporate Clients. From 2012 – 2016 Ms. Reijnen worked for Alvarez & Marsal as a Managing Director in Restructuring and Financial Institutions & Advisory Services.

Ms. Reijnen currently works as an independent finance professional.

Ms. Reijnen holds a Master’s degree in Business Economics from the Erasmus University Rotterdam and is an alumna of Harvard Business School.

Mr. C.J. Stoufs joined the Supervisory Board of the Company in October 2008.

Mr. Stoufs worked at Akzo/Fabelta from 1974 – 1980, when he was recruited by PA Technology as Senior Consultant. After five years with PA Technology, Mr. Stoufs worked at Occidental Petroleum. Mr. Stoufs joined FMC Corp. in 1990 and came to Capricorn Venture Partners N.V. as Senior Investment Manager in 2000.

Mr. Stoufs currently serves at the Board of Directors of Capricorn Cleantech Fund, FRX Polymers N.V., FRX Polymers Inc. and Green Biologics Ltd. Previously, Mr. Stoufs served at the Board of Directors of BioAlliance, Elbion / 4AZA, TiGenix, UroGene, FlandersBio vzw, Fluxome Sciences A/S, Alaska Food Diagnostics, AK Diagnostics Europe and Capricorn Venture Fund II.

Mr. Stoufs holds a Master of Science in Chemistry. He is also a graduate in Business Administration and a graduate in International Trade from the University of Brussels.

Mr. J.S. Wolfson joined the Supervisory Board of the Company in January 2013.

Mr. Wolfson is the chairman of TerraVia Holdings Inc., formerly named Solazyme Inc., a company he co-founded in 2003. Prior to Solazyme, Mr. Wolfson was the Vice President of Finance and Business Development for 7thOnline. Prior to that, Mr. Wolfson was co-founder, president and chief operating officer of InvestorTree, a SaaS/Internet based financial services company. He was also an adjunct faculty member in the Economics department at Hunter College (CUNY).

His other current important positions outside the Group include: chairman and CEO of TerraVia Holdings Inc. NASDAQ.

Mr. Wolfson holds J.D. and M.B.A. degrees from the NYU School of Law and the NYU Stem School of Business. Additionally, he spent several years as an Adjunct Assistant Professor of Economics at Hunter College of the City University of New York.

The Company's registered address (Zekeringstraat 29, 1014 BV Amsterdam, the Netherlands), serves as the business address for all members of the Supervisory Board.

Appointment, suspension and removal

The Articles of Association provide that the Supervisory Board shall consist of at least three members. Only natural persons (not legal entities) may be appointed as members of the Supervisory Board. The members of the Supervisory Board are appointed by the General Meeting as described below. Each Supervisory Board member shall be appointed or re-appointed for a period of not more than 4 years. The Supervisory Board member may then subsequently be re-appointed again for a period of 2 years, which appointment may be extended by at most 2 years. In the event of a re-appointment after an 8 year period, reasons should be given in the consultative report of the Supervisory Board.

If a member of the Supervisory Board is to be appointed, the Supervisory Board shall make a binding nomination of at least the number of persons prescribed by law. The General Meeting may at all times overrule the binding nomination by a majority of at least two-thirds of the votes cast representing more than half of the issued capital of the Company. If the General Meeting overrules the binding nomination, the Supervisory Board shall make a new binding nomination. The nomination shall be included in the notice of the General Meeting at which the appointment shall be considered. If a nomination has not been made or has not been made in due time, this shall be stated in the notice and the General Meeting shall be free to appoint a member of the Supervisory Board at its discretion by a simple majority representing at least one-third of the issued capital of the Company.

The General Meeting may at any time dismiss or suspend any member of the Supervisory Board. If the Supervisory Board proposes the dismissal or suspension of a Supervisory Board member to the General Meeting, the General Meeting can resolve upon such dismissal or suspension by a resolution adopted by a simple majority of the votes cast. If the Supervisory Board has not made a proposal for the dismissal or suspension of a Supervisory Board member, the General Meeting can only resolve upon the dismissal or suspension of such Supervisory Board member by a resolution adopted by a majority of at least two thirds of the votes cast representing more than half of the issued capital.

The Supervisory Board shall appoint one of its members to be the chairperson of the Supervisory Board.

The Supervisory Board shall prepare a profile of its scope and composition taking into account the nature of the Company's business, its activities, and the desired expertise, experience and independence of its members. The composition of the Supervisory Board shall be such that the combined experience, expertise and independence of its members meets the Supervisory Board profile and enables the Supervisory Board to best carry out the variety of its responsibilities and duties to the Company and the Company's stakeholders , consistent with applicable law and regulations.

Supervisory Board decisions

Pursuant to the Supervisory Board Regulations, the Supervisory Board can in principle only validly adopt resolutions in a meeting at which at least one half of its members is present or represented provided that members who have a conflict of interest shall not be taken into account when calculating this quorum. Resolutions of the Supervisory Board are adopted by a simple majority of votes. The Supervisory Board may also adopt resolutions outside a meeting.

Pursuant to the Supervisory Board Regulations, each Supervisory Board member (other than the chairperson) shall immediately report any (potential) conflict of interests concerning a Supervisory Board member to the chairperson. In case the chairperson has a (potential) conflict of interests, he/she shall immediately inform the vice-chairperson of the Supervisory Board thereof. The chairman or the vice-chairman (as applicable) shall determine whether a reported (potential) conflict of interest qualifies as a conflict of interest within the meaning of Section 2:140 DCC to which the following applies.

A Supervisory Board member may not participate in the adoption of resolutions (including any deliberations) if he or she has a direct or indirect personal interest conflicting with the interests of the Company and the business connected therewith. If all members of the Supervisory Board have conflicting personal interest, the resolution concerned will nevertheless be adopted by the Supervisory Board. If a member of the Supervisory Board does not comply with the provisions on conflicts of interest in the Supervisory Board Regulations, the resolution concerned is subject to nullification (*vernietigbaar*) and this member may be held liable towards the Company.

All transactions in which there are conflicts of interest with members of the Management Board must be agreed on terms that are customary in the sector in which the Company operates and must be approved by the Supervisory Board.

Supervisory Board Committees

The Supervisory Board has appointed an Audit Committee, a Remuneration Committee and a Nomination Committee. These committees are tasked with preparing the decision-making of and advising the Supervisory Board, although the Supervisory Board remains collectively responsible for the fulfilment of the duties delegated to its committees. The Supervisory Board shall prepare and publish a report on its functioning and activities and of the committees during the preceding financial year. In accordance with the Articles of Association and the Supervisory Board Regulations, the Supervisory Board has drawn up rules on each committee’s role, responsibilities and functioning. The committee regulations are incorporated in the Supervisory Board Regulations that are published on the Company’s website.

Audit Committee
The duties of the Audit Committee include supervising and monitoring, and advising the Management Board on, the effectiveness of the Company’s internal risk management and control systems, supervising the enforcement of the relevant legislation and regulations, and supervising the effect of codes of conduct. The Audit Committee further supervises the submission of financial information by the Company, compliance with recommendations and observations of the Company’s internal auditor and the external auditor, functioning of the internal audit department and the Company’s policy on tax planning. It furthermore maintains contact with and supervises the external accountant and it prepares the nomination of an external accountant for appointment by the General Meeting.

The Audit Committee shall hold at least four meetings per year and will consist of Ms. G.E.A. Reijnen (chairman) and Mr. C.J. Stoufs.

Remuneration Committee
The duties of the Remuneration Committee include advising the Supervisory Board on the exercise of its duties regarding the remuneration policy, preparing proposals for the Supervisory Board on these subjects and preparing the remuneration report.

The Remuneration Committee shall hold at least two meetings per year and shall consist of Mr. D.J. Lucquin (chairman), Mrs. G.E.A. Reijnen and Mr. J.S. Wolfson.

Nomination Committee
The duties of the Nomination Committee include drawing up selection criteria and appointment procedures for Supervisory Board and Management Board members, periodically assessing the size and composition of the Supervisory Board and Management Board members and the functioning of the individual members, and making proposals for appointments and re-appointments.

The Nomination Committee shall hold at least two meetings per year and shall consist of Mr. D.J. Lucquin (chairman), Mrs. G.E.A. Reijnen and Mr. J.S. Wolfson.

13.4 Senior Management

At the date of this Prospectus, the Senior Management comprises:

Name	Date of birth	Position
G.J.M. Gruter	12 May 1963	CTO
S. Olivier	30 June 1964	Managing Director Catalysis
C. Portocarero	20 December 1967	Legal counsel

Mr. G.J.M. Gruter joined the Group when it was established in 2000. He was responsible for Catalysis contract research and for the Parallel Reactor Technology Platform development. After his appointment as Chief Technology Officer (**CTO**) in January 2004, he initiated the development of the YXY Technology. He is today responsible for PEF fibre/film development and FDCA applications, the Company's patent portfolio and its innovation strategy. He is also head of Renewable Chemistries.

Before joining the Company, Mr. Gruter worked at DSM from 1994 to 2000 where he *inter alia* chaired DSM's corporate high-throughput technology activities. He was also Professor of polymer catalysis at Eindhoven University of Technology (1999 – 2006).

His current important positions outside the Group include: Professor of Industrial Sustainable Chemistry at the University of Amsterdam (20%), member of the scientific board of the Dutch Institute for Catalysis Research (NIOK), treasurer of the Association of the Industrial Advisory Board of NIOK (VIRAN), member of the innovation policy committee of the Association of the Dutch Chemical Industry (VNCI) and member of the NWO PPS Program Committee.

Mr. Gruter holds a Master Degree in Organic Chemistry and a PhD Organometallic Chemistry & Catalysis from the VU in Amsterdam. He is inventor on more than 100 patents and was elected European CTO of 2014.

Mr. S. Olivier joined the Group in June 2015 as Managing Director of Catalysis. Before joining the Group, Mr. Olivier worked at Albemarle from 2005 to 2014 and at Akzo-Nobel from 1994 to 2004 in a range of general management and commercial roles in the catalyst industry. In the period 2011-2013, Mr. Olivier was a representative director of Nippon Ketjen (Tokyo, Japan).

Mr. Olivier holds a Master's degree in Chemistry from the Leiden University in the Netherlands.

The Company's registered address (Zekeringstraat 29, 1014 BV Amsterdam, the Netherlands, see Chapter 14 "Description of Share Capital and Corporate Governance", section 14.1 "General") serves as the business address for all members of the Senior Management.

Mrs. C. Portocarero joined the Group in April 2012 as legal counsel. Before joining the Group, Ms. Portocarero worked at Aescap Ventures and for seventeen years at AT&T in numerous legal positions, including Senior Attorney and Chief Regional Counsel EMEA.

Ms. Portocarero holds a Master's degree in Law from the Radboud University Nijmegen.

The Company is seeking to appoint a Chief Commercial Officer (**CCO**) in the short term.

13.5 Potential conflicts of interest and other information

Mr. Lucquin has been appointed to the Supervisory Board at the nomination of the Company's major Shareholder Sofinnova. Reference is made to Chapter 15 "Major Shareholders". The interest of a Shareholder does not necessarily align with the interest of the Company. The Company does not expect that this will cause Mr. Lucquin to have a conflict with the duties he has towards the Company.

Other than the above, the Company is not aware of any circumstance that may lead to a potential conflict of interest between the private interests or other duties of members of the Management Board, the private interests or other duties of members of the Supervisory Board and the private interests or other duties of members of Senior Management and between private interests of members of the Management Board, Supervisory Board and Senior Management vis-à-vis the Company. There is no family relationship between any members of the Management Board, the Supervisory Board or Senior Management.

During the last five years, none of the members of the Management Board, the Supervisory Board or Senior Management (i) has been convicted of fraudulent offenses, (ii) has served as a director or officer of any entity subject to bankruptcy proceedings, receivership or liquidation or (iii) has been subject to any official public incrimination and/or sanctions by statutory or regulatory authorities (including designated professional bodies), or disqualification by a court from acting as a member of the administrative, management or supervisory body of an issuer, or from acting in the management or conduct of the affairs of any issuer.

Other than disclosed herein, the Company is not aware of any arrangement or understanding with major Shareholders, suppliers, customers or others pursuant to which any member of the Management Board or Supervisory Board was selected as a member of such management or supervisory bodies of the Company.

13.6 Management Board remuneration

The remuneration of the Management Board members shall be determined by the Supervisory Board with due observance of the remuneration policy adopted by the General Meeting (as summarised below). A proposal with respect to a remuneration scheme in the form of Shares or rights to Shares is submitted by the Supervisory Board to the General Meeting for its approval. This proposal must set out at least the maximum number of

Shares or rights to Shares to be granted to members of the Management Board and the criteria for granting or amendment.

Remuneration policy components

Fixed annual base salary

The base salary of the members of the Management Board is set around the median of remuneration levels payable within relevant comparable markets and companies. In this respect, after the Settlement Date the annual base salary of Mr. Van Aken shall amount to €250,500 and the annual base salary of Mr. Roerink shall amount to €224,900. The annual base salary of the members of the Management Board shall be fixed for a period of one year after the Settlement Date, following which the members of the Management Board will consult with the Supervisory Board about whether an adjustment of the annual base salary is deemed justified and necessary. See section "Individual remuneration" below for information regarding the current remuneration for the Management Board.

Annual variable remuneration

Annually, an individual bonus can be granted on the Group's performance, subject to approval by the Supervisory Board. The maximum achievable bonus percentage for the members of the Management Board will have (i) a cash component of no more than 40% of a Management Board member's annual base salary and (ii) a non-cash component amounting to a percentage equivalent to the cash component. Pursuant to the LTIP the members of the Management Board are obligated to invest the total non-cash component of their (net) bonus in (depositary receipts for) Shares.

Since 2006, the Company operates a share-based payment plan for its employees (see section 13.9 "Incentive schemes" under "Option plan"). This plan will be closed after Settlement. After Settlement, two new participation plans under which (rights to acquire) (depository receipts for) Shares will be introduced: the ESOP and LTIP (as described in section 13.9 "Incentive schemes" below). The members of the Management Board will be invited to participate in these plans.

Pension and fringe benefits

The members of the Management Board are allowed to participate in the pension plan of the Company.

The members of the Management Board will be entitled to customary fringe benefits, such as car allowances and reimbursement of costs. In this respect, after the Settlement Date Mr. Van Aken and Mr. Roerink will be entitled to car allowance of €9,600 per year. These amounts are exclusive of VAT.

Severance payment arrangements

No severance payment arrangements have been agreed upon with the members of the Management Board or the Supervisory Board.

Adjustments to variable remuneration

Pursuant to Dutch law, the variable remuneration of managing directors may be reduced or managing directors may be obliged to repay (part of) their remuneration to the company if certain circumstances apply, which are summarised below.

Pursuant to Dutch law, the Supervisory Board may adjust the variable remuneration to an appropriate level if payment of the variable remuneration were to be unacceptable according to the criteria of reasonableness and fairness. In addition, the Supervisory Board will have the authority under Dutch law to recover from a member of the Management Board any variable remuneration awarded on the basis of incorrect financial data in respect of underlying targets or other circumstances of which the variable remuneration is dependent.

Furthermore, Dutch law prescribes that, in case the value of the Shares (including rights to subscribe for Shares) granted by the Company to the respective members of the Management Board as part of their remuneration increases during a period in which a public offer is made on the Shares, the remuneration of that respective member of the Management Board will be reduced by the amount by which the value of the Shares granted by the Company to such member has increased. Similar provisions apply in the situation of an intended legal merger or demerger, or if the Company intends to enter into certain transactions that are of such significance to the Company that the Management Board requires the approval of the General Meeting pursuant to Dutch law (i.e. transactions that fall within the scope of Section 2:107a DCC).

Individual remuneration

The total remuneration the Company paid to or for the benefit of members of the Management Board for FY 2015 amounted to €604 thousand. The following table denotes the breakdown in remuneration of members of the Management Board for FY 2015 (€ in thousands).

Name	Base salary	Variable remuneration	Other payment	Total remuneration (1)
T.B. van Aken	€215	€42	€71	€328
F.C.H. Roerink	€195	€29	€53	€276
Total	€410	€71	€123	€604

(1) Total remuneration does not include social security payments.

Employment, service and severance agreements

On 7 August 2002, the Company entered into an employment agreement with Mr. Van Aken governed by Dutch law. The employment agreement of Mr. Van Aken may be terminated by either party with due observance of a notice period of one month or any longer period required by law. The employment contract will terminate in any event without notice being required at the end of the month in which Mr. Van Aken reaches the age of 65.

On 9 January 2007, the Company entered into an employment agreement with Mr. Roerink governed by Dutch law. The employment agreement of Mr. Roerink may be terminated by either party with due observance of a notice period of two months by Mr. Roerink and four months by the Company. The employment contract will terminate in any event without notice being required at the end of the month in which Mr. Roerink reaches the age of 65.

13.7 Supervisory Board remuneration

Pursuant to the Articles of Association, the General Meeting may establish a remuneration for Supervisory Board members. The remuneration of the Supervisory Board members shall be determined by the General Meeting upon a proposal by the Supervisory Board. Supervisory Board members shall be reimbursed for all reasonable costs incurred in connection with their attendance of meetings. Any other expenses shall only be reimbursed, either in whole or in part, if incurred with the prior consent of the chairperson of the Supervisory Board.

The total remuneration paid by the Company to or for the benefit of members of the Supervisory Board for FY 2015 amounted to €98 thousand in salary and €62 thousand in share-based payments. The following table denotes the breakdown in remuneration of members of the Supervisory Board for FY 2015 (€ in thousands).

Name	Remuneration	Share-based payments	Total
J.M. van der Eijk	€50	€11	€61
M.A. de Haan	-	-	-
D.J. Lucquin	-	-	-
G.E.A. Reijnen	€23	€35	€58
C.J. Stoufs	-	-	-
J.S. Wolfson	€25	€16	€41
Total	€98[195]	€62	€160

(1) Total remuneration does not include social security payments.
(2) Mr. De Haan shall resign as member of the Supervisory Board at Settlement.
(3) As of Settlement, Mr. van der Eijk will be appointed as vice-chairman of the Supervisory Board.

Following the Settlement Date the annual remuneration of the members of the Supervisory Board shall be as follows:
- membership of the Supervisory Board: €40 thousand;
- chairmanship of the Supervisory Board: an additional €35 thousand;
- membership of a committee of the Supervisory Board: €5 thousand (per committee);
- chairmanship of the audit committee of the Supervisory Board: an additional €5 thousand.

In addition, the members of the Supervisory Board may participate in the ESOP (as described in section 13.9 "Incentive schemes" below).

[195] Difference of €6 thousand compared to the FY 2015 audited financial statements (€92 thousand), which is the result of an estimate at end of FY 2015 compared to the actual expense included in this overview.

13.8 Senior Management remuneration

The total remuneration the Company paid to or for the benefit of members of the Senior Management (including the former CCO who left Avantium as per 1 August 2016) for the FY 2015 amounted to approximately €1,355,283.

13.9 Incentive schemes

This paragraph discusses the current and new incentive schemes after Settlement of Avantium. The participants of these incentive schemes acquire depositary receipts for Shares. The Shares are held by the Avantium Foundation. The rights of holders of depository receipts for Shares are laid down in the conditions of administration that apply to the depositary receipts. Holders of depository receipts for Shares have the right to receive dividend and liquidation payments made payable on the Shares and the right to convene and attend a general meeting of depository receipts holders. One depository receipts entitles the holder to one vote at such meeting.

Option plan

Since 2006, the Company operates a share-based payment plan for its employees. Eligible employees are offered options to purchase depositary receipts for Shares. Each option relates to one Share. The depositary receipts acquired upon exercise of options granted under the option plan are blocked (i.e. may not be transferred, sold, assigned, charged, pledged or encumbered) as follows: 33% of the depositary receipts will be unblocked following the first anniversary of the date of grant of the relevant options, an additional 33% of the depositary receipts will be unblocked following the second anniversary of the date of grant of the relevant options and the remaining 34% of the depositary receipts will be unblocked following the third anniversary of the date of grant of the relevant options. Granted options have a duration of 10 years.

The table below presents information about the options granted to members of the Management Board, Supervisory Board, Senior Management and other (former) employees and consultants of the Group (also indicating the year of grant). Out of the total granted options included in the table below, 806,582 options have been exercised and for which depositary receipts were issued. As a result, 12,300,446 options are outstanding as of the date of this Prospectus.

Name	Number of outstanding options at the date of this Prospectus	after Capital Restructuring	at Settlement
T.B. Van Aken	3,291,569	329,157	329,157
F.C.H. Roerink	2,232,482	223,248	223,248
G.J.M. Gruter	1,824,779	185,478	185,478
S. Olivier	500,000	50,000	50,000
C. Portocarero	530,000	53,000	53,000
J.M. van der Eijk	150,000	15,000	15,000
J.S. Wolfson	150,000	15,000	15,000
G.E.A. Reijnen	140,000	14,000	14,000
Other (former) employees and consultants	3,451,616	345,161	345,161
Total	**12,300,446**	**1,230,044**	**1,230,044**

The option plan has been closed (i.e. no further options will be granted under this plan). All outstanding options and depositary rights for Shares will be subject to a retention period of one year following Settlement. All outstanding options can be exercised during five years following the end of the lock-up period.

The difference between the weighted average exercise price of the options granted under the option plan of €2.62 and the Offer Price is €8.38, which would be equal to a discount of 76% to the Offer Price.

After Settlement, the Company will establish two incentive plans, of which the key terms are described below.

Employee Share Option Plan

As of Settlement, Avantium will implement an employee share option plan (ESOP), which will replace the option plan as described above, pursuant to which options may be granted to employees, the Management Team, members of the Supervisory Board (to the extent permitted under the Dutch Code) and any other eligible person. On an annual basis and on certain other occasions set out in the plan rules, options under the ESOP may be (conditionally) granted. The criteria for the granting of the options will be determined by the General Meeting if it concerns a member of the Supervisory Board, by the Supervisory Board if it concerns a member of the Management Board and by the Management Board if it concerns other participants under the ESOP. The options will vest for 33 1/3 % every year following grant resulting in a 100% vesting on the third anniversary following the grant. The options have an exercise period of five years after vesting.

Long Term Investment Plan

As of Settlement, Avantium will implement a Long Term Investment Plan (LTIP) pursuant to which members of the Management Team will be offered the opportunity to buy (depositary receipts for) Shares. The objective of the LTIP is to encourage long-term commitment and retention of (*inter alia*) members of the Management Team. It further drives and rewards sounds business decisions for the Company's long-term health, and aligns the interest of participants with those of the Company and its Shareholders. The (depositary receipts for) Shares are subject to a retention period of five years. After the end of the retention period, the Company will match the (depositary receipts for) Shares granted under the LTIP in a 1:1 ratio. Pursuant to the LTIP the members of the Management Team have the opportunity to invest a percentage of their (net) bonus up to a maximum of 100%, in (depositary receipts for) Shares to be delivered by the Company under the LTIP.

Equity holdings

As of the date of this Prospectus, the Avantium Foundation holds 836,582 Shares (approximately 0.6% of the total number of Shares) and issued depositary receipts for such Shares to members of the Management Board, Supervisory Board and Senior Management and certain other employees.

The number of depositary receipts for Shares beneficially owned by members of the Management Board, the Supervisory Board and Senior Management as of the date of this Prospectus and at Settlement is set forth in the table below.

Name	Number of depository receipts for Shares owned		
	at the date of this Prospectus	after Capital restructuring	at Settlement
T.B. Van Aken	200,000	20,000	-
F.C.H. Roerink	136,500	13,650	-
G.J.M. Gruter	150,000	15,000	-
S. Olivier	-	-	-
C. Portocarero	-	-	-
J.M. van der Eijk	-	-	-
J.S. Wolfson	-	-	-
G.E.A. Reijnen	-	-	-
Other (former) employees and consultants	320,082	32,008	32,008
Total	**806,582**	**80,658**	**32,008**

13.10 Board members of the Joint Venture

On 30 November 2016, Avantium established the Joint Venture with BASF. Pursuant to the Joint Venture Agreement, the Managing Partner of the Joint Venture (as defined in Chapter 20 “General Information”, section 20.3 “Material contracts”) is a Dutch limited liability company (*besloten vennootschap*) Synvina B.V. The Company and BASF respectively hold 49% and 51% of the shares in the capital of the Managing Partner. The Managing Partner has two statutory directors:

Name	Date of birth	Position	Elected by
P. Schiffers	17 December 1970	CEO	BASF
V. Vreeken	27 November 1972	COO	Avantium

These directors may jointly represent the Managing Partner (and hence the Joint Venture). The CEO shall be authorised to decide on any matters related to the daily conduct of the business of the Joint Venture.

Mr. V. Vreeken joined the Avantium in March 2011, when he was appointed VP Operations for the YXY project, including the responsibility for YXY’s process and technology development and the pilot plant in Geleen. On 1 March 2014, Mr. Vreeken was appointed as Chief Operational Officer (**COO**) of YXY.

Before joining the Group, Mr. Vreeken worked at DSM from 1997 to 2011.

Mr. Vreeken holds a Master’s Degree in Mechanical Engineering from the University of Technology in Delft and Chemical Engineering from the University of Technology in Twente, and a Master Degree from the IESE University in Spain.

The Managing Partner has a supervisory board composed of three members nominated by the Company and three members nominated by BASF. The chairman of the supervisory board is nominated by the Company. On the date of this Prospectus, the supervisory board of the Managing Partner consists of:

Name	Date of birth	Position	Elected by
J.M. van der Eijk	23 November 1953	Chairman	Avantium
T.B. van Aken	19 October 1970	Member	Avantium
F.C.H. Roerink	14 June 1969	Member	Avantium

For more information on the Joint Venture, see Chapter 20 “General Information”, section 20.3 “Material contracts”.

13.11 Liability of members of the Management Board and the Supervisory Board

Under Dutch law, members of the Management Board and Supervisory Board may be liable towards the Company for damages in the event of improper or negligent performance of their duties. They may be jointly and severally liable for damages towards the Company for infringement of the Articles of Association or of certain provisions of the DCC. In addition, they may be liable towards third parties for infringement of certain provisions of the DCC. In certain circumstances, they may also incur additional specific civil and criminal liabilities.

Insurance

Members of the Management Board, Supervisory Board and certain other officers are insured under an insurance policy taken out by the Company against damages resulting from their conduct when acting in their capacities as members or officers.

Indemnification

The Articles of Association include provisions regarding the indemnification of current and former members of the Management Board and the Supervisory Board.

There shall, however, be no entitlement to reimbursement if and to the extent that: (i) a Dutch court has established in a final and conclusive decision that the act or failure to act of the person concerned may be characterised as wilful (*opzettelijk*), intentionally reckless (*bewust roekeloos*) or seriously culpable (*ernstig verwijtbaar*) conduct, unless Dutch law provides otherwise or this would, in view of the circumstances of the case, be unacceptable according to standards of reasonableness and fairness, or (ii) the costs or financial loss of the person concerned are covered by an insurance and the insurer has paid out the costs or financial loss.

14 DESCRIPTION OF SHARE CAPITAL AND CORPORATE GOVERNANCE

14.1 General

The Company was incorporated by a notarial deed as a private company with limited liability (*besloten vennootschap met beperkte aansprakelijkheid*) under Dutch law on 14 July 2000. Prior to Settlement, the Articles of Association will be amended and the Company will be converted into a public company (*naamloze vennootschap*) pursuant to a notarial deed of amendment and conversion in accordance with a resolution of the General Meeting (the **Conversion**). The legal and commercial name will then become Avantium N.V.

The Company is registered with the Trade Register of the Dutch Chamber of Commerce under number 34138918. Its official seat is in Amsterdam, the Netherlands. Its registered office is Zekeringstraat 29, 1014 BV Amsterdam, the Netherlands. The Company's telephone number is + 31 20 586 8080.

14.2 Summary of key provisions of the Articles of Association

Set out below is an overview of the Company's share capital, certain significant provisions of Dutch corporate law as well as a brief summary of certain provisions of the Articles of Association as they will read after the Conversion and a description of the Company's compliance with the Dutch corporate governance code (the **Dutch Code**).

This summary does not purport to give a complete overview and should be read in conjunction with the Articles of Association, together with relevant provisions of applicable law, and does not constitute legal advice regarding these matters and should not be considered as such.

14.3 Corporate objects

Pursuant to Article 3 of the Articles of Association, the Company's corporate objects are:

- to incorporate, to participate in any way whatsoever in, to manage and to supervise businesses and companies, in particular, but not limited to those involved in the research, development, improvement, manufacturing and trading of high speed experimentation technologies for application in new product and process development in the pharmaceutical, petrochemical and fine chemical, bio technology and polymers industries and other selected areas of industrial applications;
- to develop, exploit and trade in patents, trademarks, licences, know-how and other industrial property rights;
- to render advice and services to businesses and companies with which the Company forms a group and to third parties;
- to borrow, to lend and to raise funds, including the issue of bonds, promissory notes or other securities or evidence of indebtedness, as well as to enter into agreements in connection with aforementioned activities;
- to grant guarantees, to bind the Company and to pledge its assets for obligations of the Company, the companies within the Group and/or to third parties;
- to acquire, dispose of, manage and exploit registered property and items of property in general;

and to do all that is connected therewith or may be conducive thereto, all to be interpreted in the broadest sense.

14.4 Share capital

The Articles of Association provide for an authorised share capital of the Company equal to €4,500,000, divided into 45,000,000 Shares with a nominal value of €0.10 each.

All shares that are outstanding as of the date of this Prospectus are fully paid up and are subject to and have been created under Dutch law. 30,000 Shares are held in treasury.

For the number of issued and outstanding Shares upon completion of the Offering, see Chapter 15 "Major Shareholders".

History of share capital

During FY 2013, no changes to the Company's share capital occurred. The Company's issued share capital at 31 December 2013 comprised of 92,589,875 Shares.

In June 2014, the Company issued 26,525,200 Shares in connection with the completion of a new round of financing from its existing Shareholders and four new strategic investors (i.e. Swire Pacific, The Coca-Cola Company, Danone and ALPLA) in the aggregate amount of €26 million (minus €0.2 million of costs) as well as 11,362,512 Shares pursuant to the conversion of a subordinated loan outstanding since 2013 with a principal amount of €10.0 million and €1.1 million of accrued interest.

In December 2014, the Company issued 1,326,260 Shares in connection with an additional round of financing by three new investors in the aggregate amount of €1.3 million.

During FY 2014, 144,000 Shares were issued following the exercise of options by employees and 39,474 Shares were re-purchased from employees for €30,000 in total. In addition, 412 Shares were re-purchased from Akzo-Nobel Chemicals B.V. for €403,84 in total.

During FY 2015, no options were exercised and 20,000 Shares were re-purchased from employees for €200 in total.

Since 30 September 2016 there have been no changes to the Company's issued share capital. Set out below is an overview of the Company's authorised and issued share capital for the dates stated.

	30 September 2016		**31 December 2015**		**31 December 2014**		**31 December 2013**	
	share capital		**share capital**		**share capital**		**share capital**	
	authorised	**issued**	**authorised**	**issued**	**authorised**	**issued**	**authorised**	**issued**
Shares	€2 million	131,836,499	€2 million	131,866,911	€2 million	131,866,911	€2 million	92,589,875

Form and trading of Shares

All Shares are to be registered (*aandelen op naam*) and will be traded through the book-entry facilities of Euroclear Nederland. All Shares are eligible for inclusion in a collection deposit (*verzameldepot*) and/or giro deposit (*girodepot*) on the basis of the Securities Giro Act (*Wet giraal effectenverkeer*). The affiliated institutions (*aangesloten instellingen*), as defined in the Securities Giro Act, are responsible for the management of the collection deposit and Euroclear Nederland, being a central institute (*Centraal Instituut*) for the purposes of the Securities Giro Act, will be responsible for the management of the giro deposit. The Securities Giro Act excludes the transfer (*uitlevering*) of the Shares out of a collective depot or a giro depot (save for certain limited exceptions).

Issue of Shares and granting of rights to subscribe for Shares

Shares shall be issued pursuant to (i) a resolution of the General Meeting at the proposal of the Management Board, which proposal is subject to the prior approval of the Supervisory Board, or (ii) a resolution of the Management Board, subject to the prior approval of the Supervisory Board, if by resolution of the General Meeting the Management Board has been authorised for a specific period not exceeding five years to issue Shares. Unless otherwise stipulated at its grant, the authorisation cannot be withdrawn.

The General Meeting has designated the Management Board, for a period that ends 18 months following the Conversion, as the corporate body authorised to issue Shares or grant rights to subscribe for Shares. Pursuant to this designation, the Management Board may resolve to issue Shares or grant rights to subscribe for Shares (i) up to a maximum of 10% of the total number of Shares issued and outstanding on the Settlement Date for unspecified purposes plus (ii) an additional 10% of the total number of Shares issued and outstanding on the Settlement Date in connection with or on the occasion of mergers and acquisitions and strategic alliances and (iii) up to a maximum of 10% in connection with an incentive plan, stock ownership plan and/or any comparable plan, subject to the approval of the Supervisory Board. Such authorisation may from time to time be extended by a resolution of the General Meeting for a period not exceeding five years.

The above provisions shall apply by analogy to the granting of rights to subscribe for Shares. They shall not apply to the issue of Shares to persons exercising a previously granted right to subscribe for Shares.

Pre-emptive rights

Dutch law and the Articles of Association give shareholders pre-emptive rights to subscribe on a pro rata basis for any issue of new Shares or upon a grant of rights to subscribe for Shares. Such pre-emptive rights do not apply, however, in respect of (i) Shares issued for a non-cash contribution (ii) Shares issued to employees of the Company or a group company of the Company and (iii) Shares issued to persons exercising a previously granted right to subscribe for Shares.

The Articles of Association stipulate that pre-emptive rights may be limited or excluded by a resolution of the General Meeting at the proposal of the Management Board, which proposal is subject to the prior approval of the Supervisory Board. The General Meeting may also designate this authority to the Management Board for a period not exceeding five years, and only if the Management Board at that time is also authorised to issue Shares. If this authority is designated to the Management Board, the Management Board may limit or exclude pre-emptive rights, subject to the prior approval of the Supervisory Board. If less than one half of the issued capital is represented at the General Meeting, a majority of at least two-thirds of the votes cast shall be required for a resolution of the General Meeting to limit or exclude pre-emptive rights or to designate this authority to the Management Board. Unless otherwise stipulated at its grant, the designation cannot be withdrawn.

The General Meeting has designated the Management Board, for a period that ends on 18 months following the Conversion, as the corporate body authorised to limit or exclude pre-emptive rights in relation to an issuance of

Shares, subject to the prior approval of the Supervisory Board. Such authorisation may from time to time be extended by a resolution of the General Meeting for a period not exceeding five years.

Acquisition of Shares in the Company's capital

The Company may not subscribe for its own Shares on issue. The Company may acquire its own fully paid Shares (or depositary receipts therefor) at any time for no consideration. Furthermore, subject to certain provisions of Dutch law and the Articles of Association, the Company may acquire fully paid Shares (or depositary receipts therefor) in its own capital if (i) its shareholders' equity less the purchase price, does not fall below the sum of the paid-in and called-up share capital plus the reserves as required to be maintained by Dutch law or by the Articles of Association (such excess, the **Distributable Equity**), and (ii) the nominal value of the Shares (or depositary receipts therefor) which the Company acquires, holds or keeps in pledge or which are held by a subsidiary of the Company, does not exceed half of the issued capital of the Company.

Other than those Shares acquired for no consideration, Shares (or depositary receipts therefor) may only be acquired if the General Meeting has authorised the Management Board thereto, and subject to the prior approval of the Supervisory Board. This authorisation shall remain valid for a maximum of 18 months. In the authorisation, the General Meeting must specify the number of Shares (or depositary receipts therefor) which may be acquired, the manner in which they may be acquired and the limits within which the price must be set.

The General Meeting has authorised the Management Board to acquire a maximum of 10% of the issued Shares for a period of 18 months following the Conversion, at a purchase price not lower than the nominal value of the shares and not higher than 110% above the average of the closing price of the Shares on Euronext for the five business days preceding the date on which the purchase is made.

No authorisation from the General Meeting is required for the acquisition of fully paid Shares (or depositary receipts therefor) for the purpose of transferring these Shares to employees of the Company or of a Group company under a scheme applicable to such employees (e.g. a share option plan), provided that such Shares are listed on a stock exchange. Any Shares the Company holds may not be voted or counted for voting quorum purposes.

Reduction of share capital

The General Meeting may resolve to reduce the Company's issued share capital by cancelling Shares, or at the proposal of the Management Board, which proposal is subject to the approval of the Supervisory Board, by amending the Articles of Association to reduce the nominal value of the Shares. A resolution to cancel may only relate to Shares held by the Company itself.

Dividends and other distributions

The Company may only make distributions to the Shareholders insofar as its equity exceeds the Distributable Equity.

Following the adoption of the annual accounts of the Company by the General Meeting, the Management Board may, subject to the approval of the Supervisory Board, determine which part of the profits shall be reserved. The General Meeting may resolve that the part of the profits remaining after reservation shall be distributed as a dividend on the Shares; without such resolution, these profits shall also be reserved.

Subject to the approval of the Supervisory Board, the Management Board may resolve (i) to distribute an interim dividend on Shares, and (ii) that distributions on Shares are made from the Distributable Equity.

The Management Board may determine that distributions on Shares will be made payable in euro or another currency. The Management Board may, subject to the prior approval of the Supervisory Board, also resolve that a distribution on Shares shall not be paid in whole or in part in cash but in Shares or in any other form (e.g. distribution of certain assets of the Company), or decide that Shareholders shall be given the option to receive the distribution in cash or other than in cash. After approval of the Supervisory Board, the Management Board may determine the conditions under which such option can be given to the Shareholders.

According to the Articles of Association, distributions on Shares shall be made payable within 30 days after they have been declared unless the Management Board determines another date of payment.

Each of the Shares entitles its holder to equal ranking rights to dividends and other distributions.

Claims to dividends and other distributions not made within five years from the date that such dividends or distributions became payable, will lapse and any such amounts will be considered to have been forfeited to the Company.

General Meeting

An annual General Meeting shall be held once every year within six months from the end of the preceding fiscal year. Other General Meetings are held as often as the Management Board or the Supervisory Board deems such to be necessary. (In this section, the term 'Shareholders' also refers to persons to whom meeting rights accrue pursuant to Dutch law or the Articles of Association.)

A General Meeting shall be convened by the Management Board or the Supervisory Board. The general meetings may be held at Amsterdam or Haarlemmermeer (including Schiphol Airport).

Each Shareholder shall be entitled to attend the General Meeting, to address such meeting and, to the extent applicable, to exercise his or her voting rights. The Management Board must be notified in writing of a shareholder's intention to attend the meeting. Such notice must be received by the Management Board no later than on the date specified in the notice of the meeting. The Management Board may determine that the voting rights may be exercised by means of electronic communication.

Shareholders may only attend the General Meeting and participate in the voting in respect of Shares which are registered in their name on the record date as specified in the notice of the meeting. The record date will be on the 28th day prior to the date of the meeting.

The notice of the meeting shall be effected no later than on the 42nd day prior to the date of the meeting and shall state the items to be dealt with, the items to be discussed and which items are to be voted on, the place and time of the meeting, the procedure for participating at the meeting by written proxy-holder, the address of the website of the Company and, if applicable, the procedure for participating at the meeting and exercising one's right to vote by electronic means of communication.

Shareholders individually or jointly representing at least 3% of the issued share capital have the right to request the Management Board or the Supervisory Board to place items on the agenda of the General Meeting. Such item shall be included in the notice or shall be notified in the same way as the other subjects for discussion, if the Company has received the request (including the reasons for such request) not later than sixty (60) days before the day of the meeting.

Each Share entitles the holder to one vote at a General Meeting. Shareholders may vote by proxy. In the General Meeting, no voting rights may be exercised for any Share held by the Company or a subsidiary of the Company, nor for any Share for which the Company or a subsidiary of the Company holds the depositary receipts.

Except where Dutch law or the Articles of Association require a qualified majority, all resolutions shall be adopted by a simple majority of the votes cast.

With respect to resolutions of the General Meeting which can only be adopted if part of the issued capital is represented, a second General Meeting at which such resolutions could otherwise be adopted irrespective of the issued capital being represented, may not be convened in accordance with Section 2:120 paragraph 3 Dutch Civil Code (**DCC**).

Amendment of the Articles of Association

The General Meeting may resolve to amend the Articles of Association, subject to a proposal by the Management Board, which requires the approval of the Supervisory Board.

The General Meeting may furthermore resolve to change the corporate form of the Company. A change of the corporate form shall require a resolution to amend the Articles of Association, subject to a proposal by the Management Board, which requires the approval of the Supervisory Board.

Dissolution and liquidation

In the event of dissolution, the business of the Company will be liquidated in accordance with Dutch law and the Articles of Association, and the members of the Management Board (unless otherwise determined by the General Meeting) will become liquidators, acting under supervision of the Supervisory Board. During liquidation, the provisions of the Articles of Association will remain in force to the extent possible.

Any assets remaining after settlement of debts shall be distributed to the shareholders in proportion to the aggregate nominal value of the Shares held by each of them.

14.5 Corporate governance code

On 9 December 2016, the Dutch Corporate Governance Committee (chaired by Mr Van Manen), presented the final revised Dutch Corporate Governance Code (the Dutch Code), revising the code of 9 December 2003. The Dutch Code contains principles and best practice provisions for management boards, supervisory boards, shareholders and general meetings of shareholders and audit and financial reporting. The Code will be applicable as of the financial year 2017 (presuming that the relevant resolutions will be adopted by the cabinet of the Dutch government in the course of 2017).

Each public company (*naamloze vennootschap*) under Dutch law, with its official seat in the Netherlands, whose shares or depositary receipts for shares have been admitted to listing on a stock exchange, or more specifically to trading on a regulated market or a comparable system, and all large companies whose registered offices are in the Netherlands (balance sheet value > €500 million) whose shares or depositary receipts for shares have been admitted to trading on a multilateral trading facility or a comparable system, are required under Dutch law to disclose in their annual reports whether or not they apply the provisions of the Dutch Code that relate to the management board or supervisory board and, if they do not apply, to explain the reasons why. The Dutch Code provides that if a company's general meeting explicitly approves the corporate governance structure and policy and endorses the explanation for any deviation from the best practice provisions, such company will be deemed to have applied the Dutch Code.

The Company acknowledges the importance of good corporate governance and agrees with the principles of the Dutch Code and has taken and will take further steps it considers appropriate to implement the Dutch Code.

The 2009 Belgian Code on Corporate Governance (the Belgian Code) applies to companies incorporated in Belgium whose shares are admitted to trading on a regulated market. The Belgian Code and the Dutch Code are mainly based upon the same or at least comparable principles of good corporate governance. As the Company is incorporated under Dutch law and also has a listing on Euronext Amsterdam, it shall apply the Dutch Code.

14.6 Non-compliance with the corporate governance code

The practices where the Company is not in compliance with the Dutch Code are the following:

- *Principle 1.3: The duty of the internal audit function is to assess the design and the operation of the internal risk management and control systems. The management board is responsible for the internal audit function. The supervisory board oversees the internal audit function and maintains regular contact with the person fulfilling this function.*

Due to its size, the Company shall initially not install a separate department for the internal audit department. In line with best practice provision 1.3.6, the Supervisory Board will assess annually whether adequate alternative measures have been taken, partly on the basis of a recommendation issued by the audit committee, and will consider whether it is necessary to establish an internal audit department. The Supervisory Board shall include its conclusions, along with any resulting recommendations and alternative measures in its report.

- *Best practice provision 3.3.2: Supervisory board members may not be awarded remuneration in the form of shares and/or rights to shares.*

To continue to be able to attract and retain top talent in a competitive and global environment and to focus the Supervisory Board on creation of sustainable added value, Avantium will as of Settlement introduce an employee share option plan (ESOP) as described in Chapter 13 "Management, Supervisory Board, Senior Management and employees", section 13.9 "Incentives schemes", pursuant to which options to buy (depositary receipts for) Shares can be granted to amongst others members of the Supervisory Board.

- *Best practice provision 4.2.3: Analyst meetings, analyst presentations, presentations to institutional or other investors and press conferences should be announced in advance on the company's website and by means of press releases. Analysts' meetings and presentations to investors should not take place shortly before the publication of the regular financial information. All shareholders should be able to follow these meetings and presentations in real time, by means of webcasting, telephone or otherwise. After the meetings, the presentations should be posted on the company's website.*

The Company shall initially not enable Shareholders to follow analyst meetings, presentations to (institutional) investors and press conferences in real time by means of webcasting, telephone or otherwise. In this respect the Company does not comply with best practice provision 4.2.3 of the Dutch Code, since, considering the Company's size, it would create an excessive burden to provide such facilities. The Company shall regularly examine whether it is desirable to provide those facilities and possibly amend its policy in this respect. In accordance with best practice provision 4.2.3 of the Dutch Code, the Company shall announce meetings with analysts, presentations to analysts, presentations to (institutional) investors and press conferences in advance on the Company's website and by means of press releases. After the meetings, the presentations shall be posted on the Company's website.

- *Best practice provision* 4.3.3: *The general meeting of shareholders of a company not having statutory two-tier status (structuurregime) may pass a resolution to cancel the binding nature of a nomination for the appointment of a member of the management board or of the supervisory board and/or a resolution to dismiss a member of the management board or of the supervisory board by an absolute majority of the votes cast. It may be provided that this majority should represent a given proportion of the issued capital, which proportion may not exceed one-third. If this proportion of the capital is not represented at the meeting, but an absolute majority of the votes cast is in favour of a resolution to cancel the binding nature of a nomination, or to dismiss a board member, a new meeting may be convened at which the resolution may be passed by an absolute majority of the votes cast, regardless of the proportion of the capital represented at the meeting.*

The Articles of Association provide that the Supervisory Board may make binding nominations. In case the Supervisory Board has made a binding nomination for the appointment of a Management Board or a Supervisory Board member, the nominee shall be appointed irrespective of the majority of the votes cast in favour. The General Meeting may override the binding nature of such nomination by a resolution of two-thirds of the votes cast, which votes also need to represent more than half of the issued share capital. If the Supervisory Board has not made a binding nomination, the General Meeting shall be free to appoint a member of the Management Board or the Supervisory Board at its discretion by a simple majority representing at least one-third of the issued share capital.

Pursuant to the Articles of Association, the General Meeting may at any time dismiss a member of the Management Board or the Supervisory Board. The General Meeting may only adopt a resolution to dismiss such a member by a simple majority at the proposal of the Supervisory Board. Without such proposal, the resolution shall require a two-thirds majority of the votes cast, representing more than half of the issued share capital.

These provisions deviate from best practice provision 4.3.3 of the Dutch Code. The purpose of these provisions is to safeguard the continuity of the Company and its Group companies.

14.7 Disclosure rules

Home member state for purposes of the Transparency Directive

On admission of the Shares to listing on Euronext Amsterdam, the Company will be a public company with limited liability (*naamloze vennootschap*) incorporated under Dutch law. The Netherlands is the home member state of the Company for the purposes of Directive 2004/109/EC, as amended (the Transparency Directive). As a consequence, the Company will be subject to financial and other reporting obligations under the FSA and the Financial Reporting Supervision Act (*Wet toezicht financiële verslaggeving*, the **FRSA**), which both implement the Transparency Directive in the Netherlands.

Disclosure of information

The Company is required to publish its annual report (consisting of the audited annual accounts, the annual report and the responsibility statement) within four months after the end of each fiscal year and its half-yearly report (consisting of the half-yearly unaudited accounts, the half-yearly report and the responsibility statement) within three months after the end of the first six months of each fiscal year. Both the annual report and the half-yearly report of the Company are required to be made available to the public during a period of at least 10 years.

Financial Reporting Supervision Act

On the basis of the FRSA, the AFM supervises the application of financial reporting standards by, amongst others, companies whose corporate seat is in the Netherlands and whose securities are listed on a regulated Dutch or foreign stock exchange.

Pursuant to the FRSA, the AFM has an independent right to (i) request an explanation from the Company regarding its application of the applicable financial reporting standards and (ii) recommend the Company to make further explanations available. If the Company does not comply with such a request or recommendation, the AFM may request that the Enterprise Chamber of the Amsterdam Court of Appeal (*Ondernemingskamer van het Gerechtshof te Amsterdam*, the **Enterprise Chamber**) orders the Company to (i) provide an explanation of the way it has applied the applicable financial reporting standards to its financial reports or (ii) prepare its financial reports in accordance with the Enterprise Chamber's instructions.

Shareholder disclosure and reporting obligations

Long positions

Pursuant to the FSA, upon the Company becoming a listed company, each shareholder who holds a substantial holding in the Company should forthwith notify the AFM of such substantial holding. Substantial holding means the holding of at least 3% of the Shares or the ability to vote on at least 3% of the voting rights of such Shares. Any person who, directly or indirectly, acquires or disposes of an interest in the share capital or voting rights of the Company must without delay give notice to the AFM, if, as a result of such acquisition or disposal, the percentage of capital interest or voting rights held by such person, directly or indirectly, reaches or crosses the following thresholds: 3%, 5%, 10%, 15%, 20%, 25%, 30%, 40%, 50%, 60%, 75% and 95%.

In addition, any person whose capital interest or voting rights reaches or crosses a threshold due to a change of the outstanding share capital of the Company or in votes that can be cast on the outstanding share capital of the Company, as notified by the Company to the AFM, must give notice to the AFM no later than the fourth trading day after the AFM has published the change in the share capital and/or voting rights in the public register.

Equally, if the composition of a notified holding differs from the previous notification, because options or any other form of negotiable security, not being options, were converted into shares or depositary receipts for shares or vice versa, or because shares were exchanged for depositary receipts or vice versa, a notice must be given to the AFM within four trading days of the moment of change. The same applies if the different composition was caused by the exercise of rights to acquire voting rights.

The notification to the AFM should indicate whether the interest is held directly or indirectly, and whether the interest is an actual or a potential interest.

For the purpose of calculating the percentage of capital interest or voting rights, amongst others, the following interests must be taken into account: (i) shares or depositary receipts for shares or voting rights directly held (or acquired or disposed of) by any person, (ii) shares or depositary receipts for shares or voting rights held (or acquired or disposed of) by such person's controlled undertakings or by a third party for such person's account or by a third party with whom such person has concluded an oral or written voting agreement (including a discretionary power of attorney), (iii) voting rights acquired pursuant to an agreement providing for a temporary transfer of voting rights against a payment, (iv) shares or depositary receipts for shares or voting rights which such person, or any controlled undertaking or third party referred to above, may acquire pursuant to any option or other right held by such person (including, but not limited to, on the basis of convertible or exchangeable bonds).

For the same purpose of calculating the percentage of capital interest or voting rights a person disposes of, one should take into account: (i) financial instruments of which the value depends on the increase in value of the shares or dividend rights and which will be settled other than in those shares, (ii) options for acquiring shares or depositary receipts, and (iii) negotiable instrument's which provide for an economic position similar to the economic position of a holder of shares or depositary receipts.

As mentioned above, a person is deemed to hold the interest in the share capital or voting rights that is held by its controlled undertakings as defined in the FSA. The controlled undertaking does not have a duty to notify the AFM because the interest is attributed to the undertaking in control, which as a result has to notify the interest as an indirect interest. Any person, including an individual, may qualify as an undertaking in control for the purposes of the FSA. A person who has a 3% or larger interest in the share capital or voting rights and who ceases to be a controlled undertaking for purposes of the FSA must without delay notify the AFM. As of that moment, all notification obligations under the FSA will become applicable to the formerly controlled undertaking.

A holder of a pledge or right of usufruct in respect of shares or depositary receipts for shares can also be subject to the reporting obligations of the FSA, if such person has, or can acquire, the right to vote on the shares or, in the case of depositary receipts for shares, the underlying shares. If a pledgee or usufructuary acquires the voting rights on the shares or depositary receipts for shares, this may trigger a corresponding reporting obligation for the holder of the shares or depositary receipts for shares.

Special rules apply with respect to the attribution of shares or depositary receipts for shares or voting rights which are part of the property of a partnership or other community of property.

Short positions

In addition to the above described notification obligations pertaining to capital interest or voting rights, pursuant to Regulation (EU) No 236/2012, notification must be made of any net short position of 0.2% in the issued share capital of the Company, and of every subsequent 0.1% above this threshold. Notifications starting at 0.5% and every subsequent 0.1% above this threshold will be made public via the short selling register of the AFM.

Furthermore, gross short positions shall be notified in the event that a threshold is reached, exceeded or fallen below. The same subsequent disclosure thresholds as for holders of capital interests and/or voting rights apply.

The AFM keeps a public register of all notifications made pursuant to these disclosure obligations and publishes all notifications received by it. The notifications referred to in this paragraph should be made in writing by means of a standard form or electronically through the notification system of the AFM.

Company disclosures

Under the FSA, the Company is required to file a report with the AFM without delay after the date of listing the Shares setting out its issued and outstanding share capital and voting rights. Thereafter, the Company is required to notify the AFM without delay of any changes in its share capital if its share capital has changed by 1% or more compared to the previous disclosure in respect of its share capital. The AFM must be notified of other changes in the Company's issued and outstanding share capital or voting rights within eight days after the end of the quarter in which the change occurred. The AFM will publish all such notifications relating to the Company's issued and outstanding share capital and voting rights in a public register.

Furthermore, each member of the Management Board and Supervisory Board must immediately give written notice to the AFM of all Shares and voting rights in the Company held by him or her at the time of admission of

Shares to listing on Euronext Amsterdam and thereafter of any change in his or her holding of shares and voting rights in the Company. Such notifications are disclosed in a public register kept by the AFM.

Non-compliance with disclosure obligations

Non-compliance with the disclosure obligations set out in the paragraph above is an economic offence and may lead to criminal charges. The AFM may impose administrative penalties or a cease-and-desist order under penalty for non-compliance. If criminal charges are pressed, it is no longer allowed to impose administrative penalties and vice versa. Furthermore, a civil court can impose measures against any person who fails to notify or incorrectly notifies the AFM of matters required to be correctly notified. A claim requiring that such measures be imposed may be instituted by, amongst others, the Company and/or one or more shareholders who alone or together with others represent(s) at least 3% of the Company's issued and outstanding share capital. The measures that the civil court may impose include:

(i) an order requiring the person violating the disclosure obligations under the FSA to make the appropriate disclosure;

(ii) suspension of voting rights in respect of such person's shares for a period of up to three years as determined by the court;

(iii) voiding a resolution adopted by a General Meeting, if the court determines that it is plausible that the resolution would not have been adopted but for the exercise of the voting rights of the person who is obliged to notify, or suspension of a resolution until the court makes a decision about such voiding; and

(iv) an order to the person violating the disclosure obligations under the FSA to refrain, during a period of up to five years as determined by the court, from acquiring the shares and/or voting rights in the shares.

Identity of Shareholders

The Company may request Euroclear Nederland, admitted institutions, intermediaries, relevant institutions abroad, and managers of investment institutions, to provide certain information on the identity of its Shareholders. Such request may only be made during a period of 60 days up to the day on which the General Meeting will be held. No information will be given on Shareholders with an interest of less than 0.5% of the issued and outstanding share capital of the Company. A Shareholder who, individually or together with other Shareholders, holds an interest of at least 10% of the issued and outstanding share capital may request the Company to establish the identity of the Shareholders. This request may only be made during a period of 60 days until (and not including) the 42nd day before the day on which the General Meeting will be held.

14.8 Takeover regulations

European Union takeover regulations

The European Directive on Takeover Bids (2004/25/EC) has been implemented in Dutch legislation in the FSA and the Public Takeover Bids Decree (*Besluit openbare biedingen Wft*).

Mandatory takeover offers

Pursuant to the FSA, a shareholder who directly or indirectly obtains controlling influence of a Dutch listed company, such as the Company after Admission, is required to make a public offer for all issued and outstanding shares in that company's share capital. Such controlling influence is deemed present if a (legal) person is able to exercise, alone or acting in concert, at least 30% of the voting rights in the Company. The legislation also applies to persons acting in concert who jointly acquire 30% of the voting rights. An exemption exists if such shareholder or group of shareholders reduces its holding below 30% within 30 days of the acquisition of controlling influence provided that (i) the reduction of its holding was not effected by a transfer of shares or depositary receipts to an exempted party and (ii) during this period such shareholder or group of shareholders did not exercise its voting rights.

Squeeze out procedures

Pursuant to Section 2:92a DCC, a shareholder who for his or her own account contributes at least 95% of the Company's issued capital may institute proceedings before the Enterprise Chamber against the other shareholders jointly for the transfer of their shares to the claimant. The proceedings are held before the Enterprise Chamber and can be instituted by means of a writ of summons served upon each of the minority shareholders in accordance with the provisions of the Dutch Code of Civil Procedure (*Wetboek van Burgerlijke Rechtsvordering*). The Enterprise Chamber may grant the claim for squeeze out in relation to all minority shareholders and will determine the price to be paid for the shares, if necessary upon advice of one or three experts. Once the order to transfer becomes final before the Enterprise Chamber, the person acquiring the shares shall give written notice of the date and place of payment and the price to the holders of the shares to be acquired whose addresses are known to him or her. Unless the addresses of all of them are known to him or her, he or she shall also publish the same in a newspaper with a national circulation.

Pursuant to Section 2:359c DCC, the offeror under a public offer is also entitled to start a squeeze out procedure, within three months after the public offer, if following the public offer he or she holds at least 95% of the shares and represents at least 95% of the total voting rights attached to the shares. In the event of a mandatory offer, the mandatory offer price is in principle deemed to be a reasonable price, which has to be accepted by minority shareholders. In the event of a voluntary public offer, the offered price is considered reasonable if at least 90% of the shares have been acquired.

Pursuant to Section 2:359d DCC, if the offeror has acquired at least 95% of the shares held by him or her, representing at least 95% of the total voting rights, each remaining minority Shareholder is entitled to demand a squeeze out. This procedure must be initiated with the Enterprise Chamber within three months after the end of the period for tendering shares in the public offer. With regard to the price per share to be paid by the majority shareholder, the same procedure as for squeeze out proceedings initiated by the offeror, as set out in the previous paragraph, applies.

14.9 Insider trading and market manipulation rules

Reporting of insider transactions

Recently, the regulatory framework on market abuse within Europe has been amended and extended. These revisions are laid down in the Market Abuse Directive (2014/57/EU) (MAD II) as implemented in Dutch and Belgian law and the Market Abuse Regulation (no. 596/2014) (MAR) which is directly applicable in the Netherlands and Belgium.

Pursuant to the MAR, no natural or legal person is permitted to: (a) engage or attempt to engage in insider dealing in financial instruments listed on a regulated market or for which a listing has been requested, such as the Shares, (b) recommend that another person engages in insider dealing or induce another person to engage in insider dealing or (c) unlawfully disclose inside information relating to the Shares or the Company. Furthermore, no person may engage in or attempt to engage in market manipulation.

The Company is required to inform the public as soon as possible and in a manner which enables fast access and complete, correct and timely assessment of the information, of inside information which directly concerns the Company. Pursuant to the MAR, inside information is knowledge of concrete information directly or indirectly relating to the issuer or the trade in its securities which has not yet been made public and publication of which could significantly affect the trading price of the securities (i.e. information a reasonable investor would be likely to use as part of the basis of his or her investment decision). An intermediate step in a protracted process can also deemed to be inside information. The Company is required to post and maintain on its website all inside information for a period of at least five years. Under certain circumstances, the disclosure of inside information may be delayed, which needs to be notified to the AFM after the disclosure has been made. Upon request of the AFM, a written explanation needs to be provided setting out why a delay of the publication was considered permitted.

Persons discharging managerial responsibilities, as well as persons closely associated with them (within the meaning of the MAR) are obliged to notify the Company and the AFM, ultimately on the third trading day after the transaction date, of every transaction conducted on their own account relating to the shares or debt instruments of (or other financial instruments linked to) the Company, once the threshold of €5,000 has been reached within a calendar year.

Furthermore, a person discharging managerial responsibilities is not permitted to (directly or indirectly) conduct any transactions on its own account or for the account of a third party, relating to Shares or debt instruments of the Company or other financial instruments linked thereto, during a closed period of 30 calendar days before the announcement of an half-yearly report or an annual report of the Company.

Persons discharging managerial responsibilities within the meaning of the MAR include: (a) members of the Management Board and Supervisory Board; or (b) members of the senior management who have regular access to inside information relating directly or indirectly to that entity and the authority to take managerial decisions affecting the future developments and business prospects of the Company. A person closely associated means: (a) a spouse, or a partner considered to be equivalent to a spouse in accordance with national law; (b) a dependent child, in accordance with national law; (c) a relative who has shared the same household for at least one year on the date of the transaction concerned; or (d) a legal person, trust or partnership, the managerial responsibilities of which are discharged by a person discharging managerial responsibilities or by a person referred to in point (a), (b) or (c), which is directly or indirectly controlled by such a person, which is set up for the benefit of such a person, or the economic interests of which are substantially equivalent to those of such a person.

Non-compliance with market abuse rules

In accordance with the MAR, the AFM/FSMA has the power to take appropriate administrative sanctions, such as fines, and/or other administrative measures in relation to possible infringements.

Non-compliance with the market abuse rules set out above could also constitute an economic offense and/or a crime (*misdrijf*) and could lead to the imposition of administrative fines by the AFM/FSMA. The public prosecutor could press criminal charges resulting in fines or imprisonment. If criminal charges are pressed, it is no longer allowed to impose administrative penalties and vice versa.

The AFM/FSMA shall in principle also publish any decision imposing an administrative sanction or measure in relation to an infringement of the MAR.

The Company has adopted a code of conduct in respect of the reporting and regulation of transactions in the Company's securities by members of the Management Board and Supervisory Board and the Company's employees. The Company and any person acting on its behalf or on its account is obligated to draw up an insiders list, to promptly update the insider list and provide the insider list to the AFM upon its request. The Company and any person acting on its behalf or on its account is obligated to take all reasonable steps to ensure that any person on the insider list acknowledges in writing the legal and regulatory duties entailed and is aware of the sanctions applicable to insider dealing and unlawful disclosure of inside information.

15 MAJOR SHAREHOLDERS

15.1 Major Shareholders

The following table sets forth information with respect to the beneficial ownership of each Shareholder, or group of affiliated Shareholders, who owns 3% or more of the Company's issued and outstanding share capital as of the date of this Prospectus.

Shareholder	**Amount of share capital owned**	
	Number of Shares	**Percentage of share capital and voting rights** (3)
FCPR Sofinnova Capital VI	26,218,429	19.9%
Capricorn Cleantech Fund N.V.	23,214,852	17.6%
ING Corporate Investments Participaties B.V.	18,182,700	13.8%
Coöperatieve Aescap Venture I U.A.	16,863,952	12.8%
Rise Merit Limited (1)	10,202,000	7.7%
Navitas B.V.	8,694,267	6.6%
FCPR Aster II	7,282,897	5.5%
Timber Invest 1 Coöperatief U.A.	7,282,897	5.5%
European Refreshments (2)	5,101,000	3.9%

(1) Rise Merit Limited is indirectly controlled by Swire Pacific Ltd.
(2) European Refreshments is indirectly controlled by The Coca-Cola Company.
(3) The remaining Shareholders, including the Avantium Foundation, hold an aggregate amount of 8,823,505 Shares.

15.2 Holdings at and immediately after Settlement

The first column of the table below presents information about the ownership of the Shares by each Shareholder who owns 3% or more of the Company's issued and outstanding share capital at Settlement, following the Capital Restructuring. The second and third column of the table below present information about the ownership of the Shares by each Shareholder who owns 3% or more of the Company's issued and outstanding share capital immediately after Settlement, taking into account (i) the conversion of the Convertible Loans and (ii) assuming the issuance of 8,133,168 New Offer Shares.

Shareholder	**Shares owned at Settlement, following the Capital Restructuring**		**Shares owned immediately after Settlement, without exercise of the Increase Option and the Over-Allotment Option**		**Shares owned immediately after Settlement, with full exercise of the Increase Option and the Over-Allotment Option**	
	Amount	%	Amount	%	Amount	%
FCPR Sofinnova Capital VI	2,621,842	19.9%	2,929,088	12.2%	2,929,088	11.0%
Stichting APG Developed Markets Equity Pool	-	0.0%	2,727,272	11.4%	2,727,272	10.2%
Capricorn Cleantech Fund N.V.	2,321,485	17.6%	2,469,127	10.3%	2,469,127	9.3%
PMV-TINA Comm. VA	-	0.0%	2,261,414	9.4%	2,261,414	8.5%

ING Corporate Investments Participaties B.V.	1,818,270	13.8%	2,012,258	8.4%	2,012,258	7.6%
Coöperatieve Aescap Venture I U.A.	1,686,395	12.8%	1,686,395	7.0%	1,686,395	6.3%
SFPI-FPIM SA/NV	-	0.0%	1,130,910	4.7%	1,130,909	4.2%
Rise Merit Limited	1,020,200	7.7%	1,020,200	4.2%	1,020,200	3.8%
Navitas B.V.	869,426	6.6%	968,500	4.0%	968,500	3.6%
FCPR Aster II	728,289	5.5%	814,140	3.4%	814,140	3.1%
Timber Invest 1 Coöperatief U.A.	728,289	5.5%	814,113	3.4%	814,113	3.1%
European Refreshments	510,100	3.9%	510,100	2.1%	510,100	1.9%
New (public) investors	n/a	n/a	3,633,182	15.1%	6,256,128	23.5%

All Shareholders have the same voting rights. Each registered Share confers the right to attend the General Meeting, to address such meeting and to cast one vote in the General Meeting. There are no voting restrictions (other than that the Company has no voting rights on the Shares that it holds in treasury).

16 THE OFFERING

16.1 Introduction

The Offering consists of: (i) a public offering in the Netherlands and Belgium to institutional and retail investors and (ii) private placements to certain institutional investors in various other jurisdictions. The Offering is being made outside the United States and the Offer Shares will only be offered and sold in offshore transactions outside the United States in reliance on Regulation S. The Offer Shares have not been and will not be registered under the US Securities Act. The Offering is made only in those jurisdictions where, and only to those persons to whom, offer and sales of the Offer Shares may be lawfully made.

The Company is offering up to 8,133,168 New Offer Shares (assuming no exercise of the Increase Option and the Over-Allotment Option), raising approximately €90 million of gross proceeds. If the Increase Option and the Over-Allotment Option are exercised in full, the gross proceeds of the Offering for the Company are estimated to amount to approximately €103 million and €118 million respectively. In the event that both the Increase Option and the Over-Allotment Option are exercised in full, the maximum number of New Offer Shares will amount to 10,756,114.

The Avantium Foundation is offering the Management Shares on behalf of the Company's CEO, CFO and CTO (the Managers) representing 0.6% of the Offer Shares, to enable the Managers, through the net proceeds received from the sale of respectively 20,000, 13,650 and 15,000 Management Shares to repay or compensate for financing and related costs incurred in 2007 in connection with their investment in these Shares.

If the Offering is oversubscribed, the Company in common agreement with the Joint Global Coordinators may decide to increase the total number of New Offer Shares by up to 15% of the New Offer Shares, up to a maximum of 9,353,143 New Offer Shares (the Increase Option, and any New Offer Shares offered pursuant to the exercise of the Increase Option, the Increase Shares).

The Company is expected to grant to the Underwriters the Over-Allotment Option, exercisable by ING, as Stabilisation Agent, for and on behalf of the Underwriters, within 30 calendar days after the First Trading Day, pursuant to which the Stabilisation Agent, for and on behalf of the Underwriters, may require the Company to issue at the Offer Price up to 1,219,975 Over-Allotment Shares (or up to 1,402,971 additional Over-Allotment Shares in the event that the Increase Option is exercised in full), together comprising up to 15% of the total number of New Offer Shares, to cover short positions resulting from any over-allotments made in connection with the Offering or stabilisation transactions, if any.

16.2 Expected timetable

Subject to acceleration or extension of the timetable for, or withdrawal of, the Offering, the timetable below sets forth certain expected key dates for the Offering.

Event	Expected date and time
Start of Offering Period	6 March 2017
End of Offering Period	13 March 2017
Pricing and allocation	14 March 2017
First Trading Day (trading on 'as-if-and-when-issued-and/or-delivered' basis)	15 March 2017
Settlement (payment and delivery)	16 March 2017

16.3 Offering Period

Subject to acceleration or extension of the timetable for the Offering, provided that the Offering Period is at least six business days, prospective investors may subscribe for Offer Shares during the period commencing at 09:00 CET on 6 March 2017 and ending at 17:30 CET on 13 March 2017. In the event of an acceleration or extension of the Offering Period, pricing, allocation, admission and first trading of the Offer Shares, as well as payment (in euro) for and delivery of the Offer Shares in the Offering may be advanced or extended accordingly.

Any extension of the timetable for the Offering will be published in a press release on the Company's website at least three hours before the end of the original Offering Period, and will be for at least one full business day. Any acceleration of the timetable for the Offering will be published in a press release on the Company's website at least three hours before the proposed end of the accelerated Offering Period. In any event, the Offering Period will be at least six business days.

If a significant new factor, material mistake or inaccuracy relating to the information included in this Prospectus which is capable of affecting the assessment of the Offer Shares, arises or is noted between the date of this Prospectus and Settlement, a supplement to this Prospectus will be published and the Offering Period will be extended, if so required by the Prospectus Directive, the FSA or the rules promulgated thereunder.

If a significant new factor, material mistake or inaccuracy relating to the information included in this Prospectus which is capable of affecting the assessment of the Offer Shares, arises or is noted between the date of this Prospectus and Settlement, a supplement to this Prospectus will be published and the Offering Period will be extended, if so required by the Prospectus Directive, the FSA or the rules promulgated thereunder.

A supplement will also be published in the event the Offer Price is changed. Any increase of the Offer Price on the last day of the Offering Period will result in the Offering Period being extended by at least two business days; any increase of the Offer Price on the day prior to the last day of the Offering Period will result in the Offering Period being extended by at least one business day. Investors who have already agreed to purchase or subscribe for the Offer Shares before the supplement is published shall have the right, exercisable within two business days following the publication of the supplement, to withdraw their acceptances.

16.4 Number of Offer Shares

The Company, in common agreement with the Joint Global Coordinators, may determine to increase the total number of Offer Shares by up to 15% of the New Offer Shares, up to a maximum of 9,353,143 New Offer Shares pursuant to the Increase Option, at any time prior to allocation of the Offer Shares. Any such change will be announced in a press release that will also be posted on the Company's website.

The exact number of New Offer Shares will be determined by the Company, in common agreement with the Joint Global Coordinators, after the end of the Offering Period. The number New Offer Shares will be determined on the basis of the results of the book building process. The following factors have to be taken into account: (i) economic and market conditions, (ii) a qualitative and quantitative assessment of demand for the Offer Shares, (iii) in relation to the market valuation of other companies engaged in activities similar to that of the Company, and (iv) other factors deemed appropriate. The Management Shares have priority over the New Offer Shares and will not be subject to any reduction of the number of Offer Shares.

After the end of the Offering Period, the exact number of Offer Shares and the maximum number of Over-Allotment Shares will be stated in the Offering Statement that will be published, ultimately on the first trading day following the end of the Offering Period, through a press release that will also be posted on the Company's website.

16.5 Subscription and allocation

Retail investors are entitled to cancel or amend their application, at the financial intermediary where their original application was submitted, at any time prior to the end of the Offering Period (if applicable, as accelerated or extended).

In both the Netherlands and Belgium, eligible retail investors can submit their subscriptions through their own financial intermediary. Subscription orders by eligible retail investors submitted at the counters of ING Bank, KBC Bank, KBC Securities and Rabobank, and their affiliates at no cost to the investor. Investors wishing to place subscription orders through intermediaries other than ING Bank, KBC Bank, KBC Securities and Rabobank, and their affiliates should request details of the costs which these intermediaries may charge, which they will have to pay themselves. The financial intermediary will be responsible for collecting subscriptions from eligible retail investors and for submitting their subscriptions to the Listing and Paying Agent. The Listing and Paying Agent will consolidate all subscriptions submitted by eligible retail investors to financial intermediaries and inform the Joint Global Coordinators. All questions concerning the timelines, validity and form of instructions to a financial intermediary in relation to the purchase of Offer Shares will be determined by the financial intermediaries in accordance with their usual procedures or as otherwise notified to the retail investors. The Company is not liable for any action or failure to act by a financial intermediary or the Listing and Paying Agent in connection with any purchase, or purported purchase, of Offer Shares. There is no maximum or minimum number of Offer Shares for which prospective investors may subscribe and multiple (applications for) subscriptions are permitted.

In Belgium, subscription orders by retail investors may be submitted at the counters of ING, KBC Bank and KBC Securities and their affiliates at no cost to the investor. Subscription orders by Belgian retail investors may be submitted through intermediaries other than ING, KBC Bank and KBC Securities and their affiliates but retail investors are advised to request details of the costs which these intermediaries may charge, as they will have to pay these themselves.

Investors participating in the Offering will be deemed to have checked whether and to have confirmed they meet the requirements of the transfer restrictions in Chapter 18 "Selling and Transfer Restrictions". If in doubt, investors should consult their professional advisers.

The allocation of the Offer Shares is expected to take place after termination of the Offering Period on or about 14 March 2017, subject to acceleration or extension of the timetable for the Offering, provided that the Offering

Period is at least six business days. Allocation of the Offer Shares to investors will be determined by the Company in common agreement with the Joint Global Coordinators on the basis of the respective demand of both retail investors and institutional investors and on the quantitative, and, for institutional investors only, the qualitative analysis of the order book, and taking into account the Offer Shares that must be allocated to the Cornerstone Investors as set forth below. Each financial intermediary will notify its own (retail or institutional) clients of their allocation in accordance with its usual procedures.

In the event that the Offering is oversubscribed, investors (other than the Cornerstone Investors) may receive fewer Offer Shares than they applied to subscribe for. The Joint Global Coordinators may, at their own discretion and without stating the grounds therefor, reject any subscriptions wholly or partly.

It is, furthermore, intended that retail investors in the Netherlands and Belgium will be allocated at least 10% of the Offer Shares provided that there is sufficient demand. See section 16.7 ''Retail allocation'' below.

16.6 Cornerstone Investors and Warrants

The Company has received unconditional and irrevocable commitments to participate in the Offering and subscribe for Offer Shares from certain CLA lenders for an aggregate amount of €20 million (including PMV for an amount of €10 million and FPIM for an amount of €5 million). The Company has also received firm intentions to participate in the Offering and to subscribe for Offer Shares from certain other investors for an aggregate amount of €44 million. See Chapter 17 "Plan of Distribution", section 17.1 "Cornerstone Investors". The Cornerstone Investors will be fully allocated for an aggregate amount of €64 million.

Each Cornerstone Investor who will subscribe for Offer Shares for at least €5 million will receive one Warrant for every four Offer Shares subscribed for in connection with its irrevocable commitment or firm intention, entitling it to acquire one Share per Warrant for an exercise price of 125% of the Offer Price. No Warrants shall be issued for any Offer Shares subscribed for by a Cornerstone Investor on top of its commitment or firm intention. The Cornerstone Investors will receive a total number of 1,249,998 Warrants, assuming all commitments and firm intentions result in the allocation of Offer Shares to the Cornerstone Investors. The Warrants will mature five years following the Settlement Date and are exercisable after two years following the Settlement Date. The Warrants shall not be listed on any stock exchange. The exercise price of the Warrants will be adjusted in case of a share split, a reverse share splits or a reclassification, exchange, combination, substitution of all of the Shares or similar event, to reflect the value of the original warrant immediately prior to such event. If the Company declares or pays a dividend or distribution on its Shares (in cash or otherwise) prior to the exercise of the Warrant, then upon exercise of the Warrant, the holder is entitled to receive the cash, the total number and kind of securities and property which the holder would have received had the holder owned the Shares acquired pursuant to the exercise of the Warrant as of the date the dividend or distribution occurred.

16.7 Retail allocation

Provided that there is sufficient demand, it is intended that at least 10% of the Offer Shares will be allocated to retail investors in the Netherlands and Belgium. The proportion of Offer Shares allocated to retail investors in the Netherlands and Belgium may be increased or reduced if applications received from them exceed or do not reach, respectively, 10% of the Offer Shares. Retail investors in Belgium and the Netherlands will be treated equally in terms of allocation in case of an oversubscription of the Offering. In case of oversubscription of the Offer Shares reserved for retail investors, the allocation to retail investors will be made on the basis of objective allocation criteria, such as the number of Offer Shares for which applications are submitted by retail investors.

An eligible retail investor is either:

a. a natural person resident in the Netherlands or Belgium which also includes employees of the Group resident in the Netherlands or Belgium, as the case may be;

b. a legal entity having its seat in the Netherlands or Belgium which is not an institutional investor;

c. a special investment vehicle having its seat in the Netherlands or Belgium which is a legal entity established for the express and sole purpose of providing asset management and/or retirement planning services for a natural person.

To be eligible for the retail allocation, investors must place their subscriptions during the period commencing at 09:00 CET on 6 March 2017 and ending at 17:30 CET on 13 March 2017 with their own financial intermediary. See for more information section 16.5 "Subscription and allocation" above.

16.8 Payment

Payment (in euro) for the Offer Shares is expected to take place on the Settlement Date. Taxes and expenses, if any, must be borne by the investor (for more information see Chapter 19 "Taxation"). Investors must pay the Offer Price in immediately available funds in full in euro on or before the Settlement Date (or earlier in the case of an early closing of the Offering and consequent acceleration of pricing, allocation, commencement of trading and Settlement).

16.9 Delivery, clearing and Settlement

The Offer Shares will be delivered in book-entry form through the facilities of Euroclear Nederland. Application has been made for the Offer Shares to be accepted for clearance through the book-entry facilities of Euroclear Nederland. Euroclear Nederland has its offices at Herengracht 459-469, 1017 BS Amsterdam, the Netherlands.

Delivery of the Offer Shares will take place on the Settlement Date, which is expected to occur on or about 16 March 2017, through the book-entry facilities of Euroclear Nederland, in accordance with its normal settlement procedures applicable to equity securities and against payment (in euro) for the Offer Shares in immediately available funds.

Prior to the Offering, there has been no public market for the Shares. Application has been made to list all of the Shares on Euronext Amsterdam and Euronext Brussels (jointly Euronext) under the symbol "AVTX" with ISIN code NL0012047823. Subject to acceleration or extension of the timetable for the Offering, trading in the Offer Shares on Euronext is expected to commence on or about 15 March 2017 (the First Trading Day). Trading in the Offer Shares before the closing of the Offering will take place on an 'as-if-and-when-issued-and/or-delivered' basis.

The Company may decide at its discretion to cancel the Offering, as a consequence the closing of the Offering will not take place. In addition, the closing of the Offering may not take place on the Settlement Date or at all if certain conditions or events referred to in the Underwriting Agreement are not satisfied or waived or occur on or prior to such date. Such conditions include (i) the receipt of customary documentation and the satisfaction of customary conditions, (ii) confirmation that the Offer Shares have been admitted to listing on Euronext, and (iii) the completion of the Conversion and Capital Restructuring, and certain other conditions. See also Chapter 17 "Plan of Distribution".

If Settlement does not take place on the Settlement Date as planned or at all the Offering may be withdrawn, in which case all subscriptions for Offer Shares will be disregarded, any allotments made will be deemed not to have been made and any subscription payments made will be returned without interest or other compensation. Any dealings in Shares prior to Settlement are at the sole risk of the parties concerned. Neither the Company, the Underwriters, the Listing and Paying Agent nor Euronext accept any responsibility or liability for any loss incurred by any person as a result of a withdrawal of the Offering or the related annulment of any transactions in Shares on Euronext. If the net proceeds in the amount of €65 million are not raised, the Offering shall be cancelled.

16.10 Share entitlements and dilution

Voting rights

Each Share confers the right to cast one vote in the General Meeting, see Chapter 14 "Description of Share Capital and Corporate Governance", section 14.2 "Summary of key provisions of the Articles of Association", section 14.4 "Share capital", under "Form and trading of Shares" and under "General Meetings" and Chapter 16 "The Offering", section 16.10 "Voting rights". All Shareholders have the same voting rights.

Ranking and dividends

The Offer Shares will, upon issue, rank equally in all respects. The Offer Shares will carry dividend rights as of the date of issue. See Chapter 7 "Dividend Policy".

Dilution

The voting interest of the current holders of Shares will be diluted as a result of the issuance of the New Offer Shares. The maximum dilution for these holders of Shares pursuant to the issuance of the New Offer Shares would be 51%, following conversion of the Convertible Loans and assuming the issuance of 10,756,114 New Offer Shares (which includes the Increase Shares and the Over-Allotment Shares). The maximum dilution for these holders of Shares would increase to 53% if all Warrants (as defined below) would be exercised. See Chapter 14 "Description of Share Capital and Corporate Governance", section 14.4 "Share capital".

16.11 Banks involved in the Offering

The following banks are involved in the Offering:

- ING and KBC Securities are acting as the Joint Global Coordinators in the Offering;
- ING, KBC Securities and Rabobank are acting as the Joint Bookrunners in the Offering;
- Oddo et Cie S.C.A. is acting as Co-Lead Manager for the Offering;
- The Joint Bookrunners and the Co-Lead Manager are acting as Underwriters in the Offering;
- ING is the Listing and Paying Agent with respect to the Shares on Euronext; and
- ING is the stabilisation agent (the **Stabilisation Agent**) with respect to the Shares on Euronext.

17 PLAN OF DISTRIBUTION

17.1 Cornerstone Investors

The Company has received unconditional and irrevocable commitments to participate in the Offering and subscribe for Offer Shares from certain CLA Lenders for an aggregate amount of €20 million (including PWV for an amount of €10 million and FPIM for an amount of €5 million). The Company has also received firm intentions to participate in the Offering and to subscribe for Offer Shares from certain other investors for an aggregate amount of €44 million (including: (i) Stichting APG Developed Markets Equity Pool for an amount of €30 million, (ii) RobecoSAM AG and Optiverder B.V. each for an amount of €5 million and (iii) two other investors each for an amount of €2 million). The Cornerstone Investors will be fully allocated for an aggregate amount of €64 million.

Each Cornerstone Investor who will subscribe for Offer Shares for at least €5 million will receive one Warrant for every four Offer Shares subscribed for in connection with its irrevocable commitment or firm intention. The Cornerstone Investors will receive a total number of 1,249,998 Warrants, assuming all commitments and firm intentions result in the allocation of Offer Shares to the Cornerstone Investors. See Chapter 16 "The Offering, section 16.6 "Warrants" for more information on the Warrants.

17.2 Underwriting Agreement

The Company, the Avantium Foundation and the Underwriters will enter into an underwriting agreement on the date of pricing and allocation (i.e. after the Offering Period has ended but before the Settlement Date) in connection with the Offering and the Admission (the Underwriting Agreement).

Under the terms and subject to the conditions to be set forth in the Underwriting Agreement, the Underwriters have severally, and not jointly or jointly and severally, agreed to procure purchasers for the Offer Shares. Further, the Underwriters have severally, and not jointly or jointly and severally, agreed to subscribe and pay for any Offer Shares (excluding any of the Over-Allotment Shares) that have been subscribed but not paid for by investors at Settlement in accordance with their respective proportion. The Underwriters' expected respective portions are indicated below.

Underwriters	**Percentage of total Offer Shares**
ING	30%
KBC Securities	30%
Rabobank	20%
Oddo et Cie S.C.A.	20%
	100%

The obligations of the Underwriters under the Underwriting Agreement are subject to: (i) performance of the Share Lending Agreement, (ii) the absence of any material adverse change in the Group's business, share capital or financial position or operating performance, (iii) receipt on or before the Settlement Date of opinions on certain legal matters from legal counsel relating to, among others, the Company, this Prospectus and the Offer Shares, (iv) the absence of circumstances having arisen that would require a supplement to this Prospectus, (v) the execution of documents relating to the Offering (e.g. the Share Lending Agreement, lock-up arrangements and investor commitment letters) and such documents being in full force and effect, (vi) the admission of the Shares to listing and trading on Euronext Amsterdam and Euronext Brussels, (vii) the completion of the Conversion and Capital Restructuring, and (viii) certain other customary closing conditions, including, among others, the accuracy of the warranties provided by the Company and the Avantium Foundation pursuant to the Underwriting Agreement, obtaining all relevant corporate approvals and the compliance by the Company with its obligations under the Underwriting Agreement and the publicity guidelines. The Joint Global Coordinators have the right to waive the satisfaction of any such conditions or part thereof.

In consideration of the agreement by the Underwriters to procure purchasers for the Offer Shares at the Offer Price and subject to the Offer Shares being sold as provided for in the Underwriting Agreement, the Company has agreed to pay to the Joint Global Coordinators a management fee of 0.70% of the price equivalent of the Offer Shares payable at Settlement. In addition, the Underwriting Agreement provides that the Company has agreed to pay a selling fee of 2.10% of the price equivalent of the Offer Shares to the Underwriters, provided however that no such fee will be due in relation to the price equivalent of any Offer Shares subscribed for by existing Shareholders and parties to the Convertible Loans. The selling fee is split between the Underwriters (i) in relation to any allocation to retail investors, according to the proportionate retail allocation serviced by their respective networks, and (ii) in relation to any allocation to institutional investors in accordance with the respective underwriting portions. Furthermore, the Underwriting Agreement provides that the Company has agreed to pay an underwriting fee of 0.70% of the price equivalent of the Offer Shares to the Underwriters payable at Settlement, provided however that no such fee will be due in relation to the price equivalent of any Offer Shares subscribed for by existing Shareholders and parties to the Convertible Loans. The Underwriting Fee is due to all Underwriters (to be split between them proportionate to their respective underwriting portions). The Underwriting Agreement furthermore provides that the Company may pay a discretionary fee with a maximum of 1% of the price equivalent of the Offer Shares to the Underwriters, the payment and allocation of which is at the sole discretion of the Company. Finally, the Underwriting Agreement provides for a success fee of up to 1.25% of the gross proceeds from Cornerstone Investors (excluding any cornerstone commitments from existing shareholders and lenders).

The fees payable on the Over-Allotment Shares are only due upon the exercise of the Over-Allotment Option.

The Underwriting Agreement provides that, upon the occurrence of a certain event, such as (i) any supplementary prospectus being published or is due to be published by the Company which concerns an event or development which has or could have, in the opinion of the Underwriters, a material adverse effect on the Group's position, prospects, results of operations, business or general affairs (ii) the Company's application for listing is withdrawn by the Company or refused by Euronext Amsterdam or Euronext Brussels, (iii) any of the Underwriters fails to meet its obligations under the Underwriting Agreement, (iv) any matter or circumstance as a result of which any of the conditions to the Underwriting Agreement will not be or is not likely to be satisfied at the required time and continued to be satisfied at the Settlement Date, (v) the Company or the Avantium Foundation breaches any of the warranties or provisions of the Underwriting Agreement or such warranties being untrue, inaccurate or misleading, (vi) any statement in the documents related to the Offering (e.g. the Share Lending Agreement, lock-up arrangements and investor commitment letters) is or has become untrue, inaccurate or misleading, (vii) a material adverse change in the Group's business, share capital or financial position that, in the judgment of the Joint Global Coordinators (acting in good faith), is material and adverse and which makes it, in the judgment of the Joint Global Coordinators (acting in good faith), impracticable or inadvisable to proceed with the offer, sale or delivery of the Offer Shares on the terms and in the manner contemplated, the Joint Global Coordinators may elect to terminate the Underwriting Agreement, in which case the Offering shall be cancelled and, as a result, no Offer Shares will be delivered. All dealings in the Offer Shares prior to delivery and settlement will be at the sole risk of the parties concerned.

The Company and the Avantium Foundation have given customary representations, warranties and undertakings to the Underwriters, and the Company has given certain indemnities to the Underwriters for losses and liabilities arising out of or in connection with the Offering or the Admission.

The Offering consists of: (i) a public offering in the Netherlands and Belgium to institutional and retail investors and (ii) private placements to certain institutional investors in various other jurisdictions. The Offering is being made outside the United States and the Offer Shares will only be offered and sold in offshore transactions outside the United States in reliance on Regulation S. The Offer Shares have not been and will not be registered under the US Securities Act.

17.3 Potential conflicts of interests

The Underwriters are acting exclusively for the Company and the Avantium Foundation and for no one else and will not regard any other person (whether or not a recipient of this Prospectus) as their respective clients in relation to the Offering and will not be responsible to anyone for giving advice in relation to the Offering and Admission and/or any other transaction or arrangement referred to in this Prospectus.

Certain of the Underwriters and/or their respective affiliates may in the future, from time to time, engage in commercial banking, investment banking and financial advisory and ancillary activities in the ordinary course of their business with the Company or any parties related to any of them, in respect of which they may in the future, receive customary fees and commissions. Additionally, the Underwriters and/or their respective affiliates may in the future hold, in the ordinary course of their business, the Company's securities for investment purposes.

ING Participaties, which is indirectly controlled by ING, holds 13.8% of the Shares at the date of this Prospectus and is expected to remain one of the major Shareholders following Admission, resulting in an indirect economic interest in the success of the Offering. Consequently, ING Participaties may have interests that may not be aligned, or could possibly conflict with the interests of investors. In respect thereof, ING has procedures in place, such as Chinese walls procedures based on rules and regulations and internal policies to prevent the sharing of information and any conflicts of interest between any of its group companies, affiliates, directors and employees engaged in its merchant banking activities and in its asset management activities.

Additionally, the Underwriters or their respective affiliates may in the future hold, in the ordinary course of their business, the Company's securities for investment purposes. As a result, these parties may have interests that may not be aligned, or could possibly conflict with the interests of investors. In respect hereof, the sharing of information is generally restricted for reasons of confidentiality, by internal procedures and by rules and regulations.

In connection with the Offering, each of the Underwriters and any of their respective affiliates, acting as an investor for its own account, may take up Offer Shares in the Offering and in that capacity may retain, purchase or sell for its own account any Offer Shares or related investments and may offer or sell such Offer Shares or other investments otherwise than in connection with the Offering. Accordingly, references in this Prospectus to Offer Shares being offered or placed should be read as including any offering or placement of Offer Shares to any of the Underwriters or any of their respective affiliates acting in such capacity. None of the Underwriters intends to disclose the extent of any such investment or transactions otherwise than pursuant to any legal or regulatory obligation to do so. In addition certain of the Underwriters or their affiliates may enter into financing arrangements (including swaps) with investors in connection with which such Underwriters (or their affiliates) may from time to time acquire, hold or dispose of Offer Shares.

As a result of these transactions or acting in the capacities described above, the Underwriters may have interests that may not be aligned, or could potentially conflict, with the interests of (potential) holders of Shares, or with the interests of the Group.

17.4 Lock-up arrangements and stand-still

Pursuant to separate lock-up letters, the existing Shareholders, the CLA Lenders and the Avantium Foundation agreed with the Joint Global Coordinators that, for a period of 180 days after the Settlement Date, they will not, subject to customary exceptions, issue, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any Shares or any securities exchangeable for or convertible into or exercisable for Shares, or enter into any other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Shares, whether any such transactions are to be settled by delivery of the Shares or other securities, in cash or otherwise (the Hard Lock-up Period). For a period of 180 days following the Hard Lock-up Period, the existing Shareholders will not, subject to customary exceptions, do any of the foregoing without the prior consent of the Joint Global Coordinators. This lock-up arrangement relates to the Shares and options held at the date of this Prospectus by all existing Shareholders and the Avantium Foundation and the Shares acquired by the CLA Lenders pursuant to the conversion of the Convertible Loans immediately after Settlement. 15,839,879 Shares and 1,230,044 options will be subject to the lock-up arrangement. The customary exceptions relate to the sale of the Management Shares in the Offering, the entering into of the Share Lending Agreement, any transfer of Shares following the acceptance of a public takeover bid, any transfer of Shares to shareholder's subsidiaries and a sale of the Shares pursuant to any security rights existing as of the date of the Underwriting Agreement or any coordinated sale. At the date of this Prospectus, according to the Shareholders' register, none of the Shares are encumbered. A coordinated sale can be initiated by one or more Shareholders holding an aggregate of at least 3% of the Shares. The coordinated sale requires the prior approval of, and shall be led by the Joint Global Coordinators, or after consultation with the Company, by all Underwriters. The coordinated sale will be structured and conducted in a manner to be agreed upon between the Joint Global Coordinators and each of the selling Shareholders.

The Company undertakes in relation to the Offering to a stand-still in relation to its securities that will last until 365 days after the Settlement Date, limiting any issue, lending, offer and sale of its securities, otherwise than with the prior written consent of the Underwriters. The stand-still will not apply to: (i) the issue or sale of Offer Shares in the Offering; (ii) any action relating to the Capital Restructuring; (iii) transactions contemplated by or required to meet liabilities under the Underwriting Agreement or the Share Lending Agreement, (iv) the granting or exercise of options and issuance of Shares pursuant to the Company's employee incentive schemes, (v) any corporate action in connection with a takeover offer, capital reorganisation, legal merger, split-up or similar transaction or process; or (vi) any action at the direction of the Underwriters (including in their capacities as Stabilisation Agent or Listing and Paying Agent).

17.5 Over-allotment and stabilisation

In connection with the Offering, the Underwriting Agreement will provide that ING, as Stabilisation Agent, or any of its agents, on behalf of the Underwriters may (but will be under no obligation to), to the extent permitted by applicable law, over-allot Shares or effect other transactions with a view to supporting the market price of the Shares at a higher level than that which might otherwise prevail in the open market. The Stabilisation Agent will not be required to enter into such transactions and such transactions may be effected on any securities market, over-the-counter market, stock exchange (including Euronext Amsterdam and Euronext Brussels) or otherwise and may be undertaken at any time during the period commencing on the First Trading Day and ending no later than 30 calendar days thereafter. The Stabilisation Agent or any of its agents will not be obligated to effect stabilising transactions, and there will be no assurance that stabilising transactions will be undertaken. Such stabilising transactions, if commenced, may be discontinued at any time without prior notice. Save as required by law or regulation, neither the Stabilisation Agent nor any of its agents intends to disclose the extent of any over-allotments made and/or stabilisation transactions under the Offering. The Underwriting Agreement will provide that the Stabilisation Agent may, for purposes of the stabilising transactions, over-allot Shares up to a maximum of 15% of the total number of New Offer Shares sold in the Offering.

In connection with the Over-Allotment Option, up to a maximum of 15% of the total number of New Offer Shares will be made available by ING Corporate Investments Participaties B.V. through a securities loan to be entered on or around the date of the Underwriting Agreement (the **Share Lending Agreement**) to the Stabilisation Agent for the account of the Underwriters.

None of the Company, the Avantium Foundation or any of the Underwriters makes any representation or prediction as to the direction or the magnitude of any effect that the transactions described above may have on the price of the Shares or any other securities of the Company. In addition, none of the Company, the Avantium Foundation or any of the Underwriters makes any representation that the Stabilisation Agent will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

17.6 Liquidity agreement with Kepler Cheuvreux S.A.

The Company has appointed Kepler Cheuvreux S.A. to trade on its behalf in the Shares on Euronext Amsterdam following the stabilisation period commencing on the First Trading Day until 30 calendar days thereafter. The purpose of this arrangement is to foster liquidity and regular trading of the Shares and to avoid price swings that are not justified by market trends. Any purchase of Shares by Kepler Cheuvreux S.A. shall occur within the authority of the Management Board to repurchase Shares. Kepler Cheuvreux S.A. shall have to make an initial purchase of Shares to enable it to implement this arrangement. Kepler Cheuvreux S.A. shall operate fully independent from Avantium.

18 SELLING AND TRANSFER RESTRICTIONS

18.1 Selling restrictions

General

No action has been or will be taken in any country or jurisdiction other than the Netherlands and Belgium that would, or is intended to, permit a public offering of the Offer Shares, or the possession or distribution of this Prospectus or any other offering material, in any country or jurisdiction where action for that purpose is required.

Persons into whose hands this Prospectus comes are required by the Company, the Avantium Foundation and the Underwriters to comply with all applicable laws and regulations in each country or jurisdiction in or from which they purchase, offer, sell or deliver Offer Shares or have in their possession or distribute such offering material, in all cases at their own expense. None of the Company, the Avantium Foundation or the Underwriters accept any legal responsibility for any violation by any person, whether or not a prospective subscriber or purchaser of any of the Offer Shares, of any such restrictions.

United States

The Offer Shares have not been and will not be registered under the US Securities Act or with any securities regulatory authority of any state of the United States for offer or sale as part of their distribution and may not be sold within the United States except in certain transactions exempt from the registration requirements of the US Securities Act.

The Offer Shares may only be resold outside the United States of America in offshore transactions in compliance with Regulation S under the US Securities Act and in accordance with applicable law. Terms used above shall have the meanings given to them by Regulation S under the US Securities Act.

European Economic Area

In relation to each relevant Member State that has implemented the Prospectus Directive (Relevant Member State) (with the exception of the Netherlands and Belgium), no offer of the Offer Shares may be made to the public in that Relevant Member State, except that offers of the Offer Shares may be made under the following exemptions under the Prospectus Directive as implemented in that Relevant Member State:

- to any qualified investor as defined in the Prospectus Directive;
- to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the Joint Global Coordinators for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive;

provided that no such offer of Offer Shares shall result in a requirement for the publication by the Company or any Underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this paragraph, the expression an "offer of the Offer Shares may be made to the public" in relation to any of the Offer Shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the Offering and the Offer Shares to be offered so as to enable an investor to decide to purchase or subscribe for the Offer Shares, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State.

United Kingdom

Any offer or sale of the Offer Shares may only be made to persons in the United Kingdom who are "qualified investors" or otherwise in circumstances which do not require publication by the Company of a prospectus pursuant to Section 85(1) of the UK Financial Services and Markets Act 2000. Any investment or investment activity to which this Prospectus relates is available only to, and will be engaged in only with, investment professionals falling within Section 19(5), or fall within Section 49(2)(a) to (d) ("high net worth; unincorporated associations, etc."), of the U.K. Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 or other persons to whom such investment or investment activity may lawfully be made available (together, Relevant Persons). Persons who are not Relevant Persons should not take any action on the basis of this Prospectus and should not act or rely on it.

Australia

This document (a) does not constitute a prospectus or a product disclosure statement under the Corporations Act 2001 of the Commonwealth of Australia (Corporations Act); (b) does not purport to include the information required of a prospectus under Part 6D.2 of the Corporations Act or a product disclosure statement under Part 6.9 of the Corporations Act; has not been, nor will it be, lodged as a disclosure document with the Australian Securities and Investments Commission (ASIC), the Australian Securities Exchange operated by ASX Limited or any other regulatory body or agency in Australia; and (c) may not be provided in Australia other than to select investors (Exempt Investors) who are able to demonstrate that they (i) fall within one or more of the categories of investors under section 708 of the Corporations Act to whom an offer may be made without disclosure under Part

6D.2 of the Corporations Act and (ii) are "wholesale clients" for the purpose of section 761G of the Corporations Act.

The Offer Shares may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for, or buy, the Offer Shares may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any Offer Shares may be distributed, received or published in Australia, except where disclosure to investors is not required in Chapters 6D and 7 of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the Offer Shares, each purchaser or subscriber of Offer Shares represents and warrants to the Company, the Underwriters and their affiliates that such purchaser or subscriber is an Exempt Investor.

As any offer of Offer Shares under this document, any supplement or the accompanying prospectus or other document will be made without disclosure in Australia under Parts 6D.2 and 7.9 of the Corporations Act, the offer of those Offer Shares for resale in Australia within 12 months may, under the Corporations Act, require disclosure to investors if none of the exemptions in the Corporations Act applies to that resale. By applying for the Offer Shares each purchaser or subscriber of Offer Shares undertakes to the Company, the Underwriters that such purchaser or subscriber will not, for a period of 12 months from the date of issue or purchase of the Offer Shares, offer, transfer, assign or otherwise alienate those Shares to investors in Australia except in circumstances where disclosure to investors is not required under the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

Japan

The Offer Shares have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (the FIEL). This document is not an offer of securities for sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or entity organised under the laws of Japan) or to others for reoffer or resale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan, except pursuant to an exemption from the registration requirements under the FIEL and otherwise in compliance with such law and any other applicable laws, regulations and ministerial guidelines of Japan.

Switzerland

The Offer Shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (SIX) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the Offer Shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, the Offer Shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of Offer Shares will not be supervised by, the Swiss Financial Market Supervisory Authority, and the offer of Offer Shares has not been and will not be authorised under the Swiss Federal Act on Collective Investment Schemes (the CISA). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of Offer Shares.

18.2 Transfer restrictions

The Offering is made outside the United States in accordance with Regulation S under the US Securities Act. The Offer Shares have not been and will not be registered under the US Securities Act.

Each purchaser of the Offer Shares outside the United States in compliance with Regulation S will be deemed to have represented and agreed that it has received a copy of this Prospectus and such other information as it deems necessary to make an informed investment decision and that:

(1) the purchaser is authorised to consummate the purchase of the Offer Shares in compliance with all applicable laws and regulations;

(2) the purchaser acknowledges that the Offer Shares have not been and will not be registered under the US Securities Act, or with any securities regulatory authority of any state of the United States, and, subject to certain exceptions, may not be offered or sold within the United States;

(3) the purchaser and the person, if any, for whose account or benefit the purchaser is acquiring the Offer Shares, was located outside the United States at the time the buy order for the Offer Shares was originated and continues to be located outside the United States and has not purchased the Offer Shares for the account or benefit of any person in the United States or entered into any arrangement for the transfer of the Offer Shares or any economic interest therein to any person in the United States;

(4) the purchaser is not an affiliate of the Company or a person acting on behalf of such affiliate;

(5) the Offer Shares have not been offered to it by means of any “directed selling efforts” as defined in Regulation S;

(6) the purchaser acknowledges that the Company shall not recognise any offer, sale, pledge or other transfer of the Offer Shares made other than in compliance with the above stated restrictions;

(7) if it is acquiring any of the Offer Shares as a fiduciary or agent for one or more accounts, the purchaser represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account; and

(8) the purchaser acknowledges that the Company, the Avantium Foundation and the Underwriters and their respective affiliates will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements.

Each person in a Relevant Member State, other than persons receiving offers contemplated in this Prospectus in the Netherlands and Belgium, who receives any communication in respect of, or who acquires any Offer Shares under, the offers contemplated hereby will be deemed to have represented, warranted and agreed to and with each of the Underwriters and the Company that:

(1) it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive; and

(2) in the case of any Offer Shares acquired by it as a financial intermediary, as that term is used in Article 3(2) of the Prospectus Directive, (i) the Offer Shares acquired by it in the offer have not been acquired on behalf of, nor have they been acquired with a view to their offer or resale to, persons in any Relevant Member State other than qualified investors, as that term is defined in the Prospectus Directive, or in other circumstances falling within Article 3(2) of the Prospectus Directive and the prior consent of the Underwriters has been given to the offer or resale; or (ii) where Offer Shares have been acquired by it on behalf of persons in any Relevant Member State other than qualified investors, the offer of those Offer Shares to it is not treated under the Prospectus Directive as having been made to such persons.

For the purposes of this provision, the expression an ‘‘offer’’ in relation to any of the Offer Shares in any Relevant Member States means the communication in any form and by any means of sufficient information on the terms of the offer and any Offer Shares to be offered so as to enable an investor to decide to purchase or subscribe for the Offer Shares, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State.

19 TAXATION

19.1 Dutch taxation

This summary solely addresses the principal Dutch tax consequences of the acquisition, ownership and disposal of Offer Shares and does not purport to describe every aspect of taxation that may be relevant to a particular holder. Tax matters are complex, and the tax consequences of the Offering to a particular holder of Offer Shares will depend in part on such holder's circumstances. Accordingly, a holder is urged to consult his or her own tax advisor for a full understanding of the tax consequences of the Offering to him or her, including the applicability and effect of Dutch tax laws.

Where in this summary English terms and expressions are used to refer to Dutch concepts, the meaning to be attributed to such terms and expressions shall be the meaning to be attributed to the equivalent Dutch concepts under Dutch tax law. Where in this summary the terms "the Netherlands" and "Dutch" are used, these refer solely to the European part of the Kingdom of the Netherlands and the legislation applicable in that part of the Kingdom. This summary assumes that the Company is organised, and that its business will be conducted, in the manner outlined in this Prospectus. A change to such organisational structure or to the manner in which the Company conducts its business may invalidate the contents of this summary, which will not be updated to reflect any such change.

This summary is based on the tax law of the Netherlands (unpublished case law not included) as it stands at the date of this Prospectus. The tax law upon which this summary is based, is subject to changes, possibly with retroactive effect. Any such change may invalidate the contents of this summary, which will not be updated to reflect such change.

The summary in this Dutch taxation paragraph does not address the Dutch tax consequences for a holder of Offer Shares who:

(i) is a person who may be deemed an owner of Offer Shares for Dutch tax purposes pursuant to specific statutory attribution rules in Dutch tax law;

(ii) is, although in principle subject to Dutch corporation tax, in whole or in part, specifically exempt from that tax in connection with income from Offer Shares;

(iii) is an investment institution as defined in the Dutch Corporation Tax Act 1969;

(iv) owns Offer Shares in connection with a membership of a management board or a supervisory board, an employment relationship, a deemed employment relationship or management role;

(v) has a substantial interest in the Company or a deemed substantial interest in the Company for Dutch tax purposes. Generally, a person holds a substantial interest if (a) such person – either alone or, in the case of an individual, together with his or her partner or any of his or her relatives by blood or by marriage in the direct line (including foster-children) or of those of his or her partner for Dutch tax purposes – owns or is deemed to own, directly or indirectly, 5% or more of the shares or of any class of shares of the Company, or rights to acquire, directly or indirectly, such an interest in the shares of the Company or profit participating certificates relating to 5% or more of the annual profits or to 5% or more of the liquidation proceeds of the Company, or (b) such person's shares, rights to acquire shares or profit participating certificates in the Company are held by him or her following the application of a non-recognition provision; or

(vi) is an entity which is a resident of Aruba, Curacao or Sint Maarten that has an enterprise which is carried on through a permanent establishment or a permanent representative on Bonaire, Sint Eustatius or Saba and the Offer Shares are attributable to such permanent establishment or permanent representative.

Taxes on income and capital gains

Resident holders of Offer Shares

A holder of Offer Shares who is resident or deemed to be resident in the Netherlands for Dutch tax purposes is fully subject to Dutch income tax if he or she is an individual or fully subject to Dutch corporation tax if it is a corporate entity, or an entity, including an association, a partnership and a mutual fund, taxable as a corporate entity, as described in the summary below.

Individuals deriving profits or deemed to be deriving profits from an enterprise

Any benefits derived or deemed to be derived from or in connection with Offer Shares that are attributable to an enterprise from which an individual derives profits, whether as an entrepreneur or pursuant to a co-entitlement to the net value of an enterprise, other than as a shareholder, are generally subject to Dutch income tax at progressive rates up to 52%.

Individuals deriving benefits from miscellaneous activities

Any benefits derived or deemed to be derived from or in connection with Offer Shares that constitute benefits from miscellaneous activities by an individual are generally subject to Dutch income tax at progressive rates up to 52%.

An individual may, *inter alia*, derive, or be deemed to derive, benefits from or in connection with Offer Shares that are taxable as benefits from miscellaneous activities if his or her investment activities go beyond regular active portfolio management.

Other individuals

If a holder of Offer Shares is an individual whose situation has not been discussed before in this section "Dutch taxation - Taxes on income and capital gains – Resident holders of Offer Shares", the value of his or her Offer Shares forms part of the yield basis for purposes of tax on benefits from savings and investments. A deemed benefit of 4% per annum of this yield basis is taxed at the rate of 30% insofar as the individual's yield basis exceeds a certain threshold. As of 1 January 2017, this deemed benefit will be determined on the basis of progressive rates starting from 2.87% up to 5.39% per annum of the yield basis. The individual's yield basis is determined as the fair market value of certain qualifying assets held by the individual less the fair market value of certain qualifying liabilities, generally determined on 1 January. Actual benefits derived from or in connection with his or her Offer Shares are not subject to Dutch income tax.

Corporate entities

Any benefits derived or deemed to be derived from or in connection with Offer Shares that are held by a corporate entity, or an entity, including an association, a partnership and a mutual fund, taxable as a corporate entity, are generally subject to Dutch corporation tax up to a maximum rate of 25%.

General

A holder of Offer Shares will not be deemed to be resident in the Netherlands for Dutch tax purposes by reason only of the execution and/or enforcement of the documents relating to the issue of Offer Shares or the performance by the Company of its obligations under such documents or under the Offer Shares.

Non-resident holders of Offer Shares

Individuals

If a holder of Offer Shares is an individual who is neither resident nor deemed to be resident in the Netherlands for purposes of Dutch income tax, he or she will not be subject to Dutch income tax in respect of any benefits derived or deemed to be derived from or in connection with Offer Shares, except if:

(i) he or she derives profits from an enterprise, whether as an entrepreneur or pursuant to a co-entitlement to the net value of such enterprise, other than as a shareholder, and such enterprise is carried on, in whole or in part, through a permanent establishment or a permanent representative in the Netherlands, and his or her Offer Shares are attributable to such permanent establishment or permanent representative; or

(ii) he or she derives benefits or is deemed to derive benefits from or in connection with Offer Shares that are taxable as benefits from miscellaneous activities performed in the Netherlands.

Income derived from the Offer Shares as specified under (i) and (ii) by an individual is subject to Dutch income tax at progressive rates up to a maximum rate of 52%.

Corporate entities

If a holder of Offer Shares is a corporate entity, or an entity including an association, a partnership and a mutual fund, taxable as a corporate entity, which is neither resident, nor deemed to be resident in the Netherlands for purposes of Dutch corporation tax, it will not be subject to Dutch corporation tax in respect of any benefits derived or deemed to be derived from or in connection with Offer Shares, except if:

(i) it derives profits from an enterprise directly, which is carried on, in whole or in part, through a permanent establishment or a permanent representative which is taxable in the Netherlands, and to which permanent establishment or a permanent representative its Offer Shares are attributable; or

(ii) it derives profits pursuant to a co-entitlement to the net value of an enterprise which is managed in the Netherlands, other than as a holder of securities, and to which its Offer Shares are attributable.

General

If a holder of Offer Shares is neither resident nor deemed to be resident in the Netherlands, such holder will for Dutch tax purposes not carry on or be deemed to carry on an enterprise, in whole or in part, through a permanent establishment or a permanent representative in the Netherlands by reason only of the execution and/or enforcement of the documents relating to the issue of Offer Shares or the performance by the Company of its obligations under such documents or under the Offer Shares.

Dividend withholding tax

General

The Company is generally required to withhold Dutch dividend withholding tax at a rate of 15% from dividends distributed by the Company, subject to possible relief under Dutch domestic law, the Treaty on the Functioning of the European Union or an applicable Dutch income tax treaty depending on a particular holder of Offer Shares' individual circumstances.

The concept "dividends distributed by the Company" as used in this Dutch taxation paragraph includes, but is not limited to, the following:

- distributions in cash or in kind, deemed and constructive distributions and repayments of capital not recognised as paid-in capital for Dutch dividend withholding tax purposes;
- liquidation proceeds and proceeds of repurchase or redemption of Offer Shares in excess of the average capital recognised as paid-in for Dutch dividend withholding tax purposes;
- the par value of Offer Shares issued by the Company to a holder of Offer Shares or an increase of the par value of Offer Shares, as the case may be, to the extent that it does not appear that a contribution, recognised for Dutch dividend withholding tax purposes, has been made or will be made; and
- partial repayment of capital, recognised as paid-in capital for Dutch dividend withholding tax purposes, if and to the extent that there are net profits, unless (a) the General Meeting has resolved in advance to make such repayment and (b) the par value of the Offer Shares concerned has been reduced by an equal amount by way of an amendment to the Articles of Association.

Gift and inheritance taxes

No Dutch gift tax or Dutch inheritance tax will arise with respect to an acquisition or deemed acquisition of Offer Shares by way of gift by, or upon the death of, a holder of Offer Shares who is neither resident nor deemed to be resident in the Netherlands for purposes of Dutch gift tax or Dutch inheritance tax except if, in the event of a gift whilst not being a resident nor being a deemed resident in the Netherlands for purposes of Dutch gift tax or Dutch inheritance tax, the holder of Offer Shares becomes a resident or a deemed resident in the Netherlands and dies within 180 days after the date of the gift.

For purposes of Dutch gift tax and Dutch inheritance tax, a gift of Offer Shares made under a condition precedent is deemed to be made at the time the condition precedent is satisfied.

Registration taxes and duties

No Dutch registration tax, transfer tax, stamp duty or any other similar documentary tax or duty, other than court fees, is payable in the Netherlands in respect of or in connection with the execution and/or enforcement (including by legal proceedings and including the enforcement of any foreign judgment in the courts of the Netherlands) of the documents relating to the issue of Offer Shares, the performance by the Company of its obligations under such documents, or the transfer of Offer Shares, except that Dutch real property transfer tax may be due upon an acquisition in connection with Offer Shares of real property situated in the Netherlands, (an interest in) an asset that qualifies as real property situated in the Netherlands, or (an interest in) a right over real property situated in the Netherlands, for the purposes of Dutch real property transfer tax.

19.2 Belgian taxation

This summary solely addresses the principal Belgian tax consequences of the acquisition, ownership and disposal of Offer Shares and does not purport to describe every aspect of taxation that may be relevant to a particular holder. Tax matters are complex, and the tax consequences of the Offering to a particular holder of Offer Shares will depend in part on such holder's circumstances. Accordingly, a holder is urged to consult his or her own tax advisor for a full understanding of the tax consequences of the Offering to him or her, including the applicability and effect of Belgian tax laws.

Where in this summary English terms and expressions are used to refer to Belgian concepts, the meaning to be attributed to such terms and expressions shall be the meaning to be attributed to the equivalent Belgian concepts under Belgian tax law. This summary assumes that the Company is organised, and that its business will be conducted, in the manner outlined in this Prospectus. A change to such organisational structure or to the manner in which the Company conducts its business may invalidate the contents of this summary, which will not be updated to reflect any such change.

This summary is based on the tax law of Belgium (unpublished case law not included) as it stands at the date of this Prospectus. The tax law upon which this summary is based, is subject to changes, possibly with retroactive effect. Any such change may invalidate the contents of this summary, which will not be updated to reflect such change.

This summary does not describe the tax treatment of investors that are subject to special rules, such as banks, insurance companies, undertakings for collective investment, brokers in securities or currencies, persons that hold, or will hold, Offer Shares as a position in a straddle, share-repurchase transaction, conversion transactions, synthetic security or other integrated financial transactions.

Holders should consult their own advisors regarding the tax consequences of an investment in Offer Shares in the light of their particular circumstances, including the effect of any state, local or other national laws.

Taxes on income and capital gains

Belgian resident and non-resident holders of Offer Shares

For purposes of this summary, a Belgian resident is an individual subject to Belgian personal income tax (that is, an individual who is domiciled in Belgium or has his or her seat of wealth in Belgium or a person assimilated to a resident for purposes of Belgian tax law), a company subject to Belgian corporation tax (that is, a corporate entity that has its statutory seat, its main establishment, its administrative seat or seat of management in Belgium), or a legal entity subject to Belgian income tax on legal entities (that is, a legal entity other than a company subject to Belgian corporation tax, that has its statutory seat, its main establishment, its administrative seat or seat of management in Belgium).

A Belgian non-resident is any person that is not a Belgian resident.

Dividend withholding tax and taxation of dividends

General

For Belgian income tax purposes, the gross amount of all benefits paid on or attributed to the Offer Shares is generally treated as a dividend distribution.

If dividends are distributed on non-Belgian shares, such as the Offer Shares, Belgian withholding tax is in principle only due if an intermediary established in Belgium intervenes in the payment thereof. Belgian withholding tax is indeed due by every intermediary established in Belgium that intervenes in the payment or attribution of dividends from a non-Belgian source. The Company does not assume responsibility for the correct withholding of Belgian withholding tax.

If the Belgian withholding tax applies, dividends are in principle subject to a 30% rate, subject to such relief as may be available under applicable domestic or tax treaty provisions.

In the case of a redemption of the Offer Shares, the redemption distribution (other than the redemption distribution included in a share buyback operated through the central stock exchange market of Euronext or of a similar market), after deduction of the part of the fiscal paid-up capital represented by the redeemed Offer Shares will, in principle, be treated as a dividend subject to a Belgian withholding tax of 30% (if a Belgian intermediary intervenes in the payment thereof), subject to such relief as may be available under applicable domestic or tax treaty provisions.

In case of liquidation of the Company, any amounts distributed in excess of the fiscal paid-up capital will be treated as a dividend and will in principle be subject to a 30% Belgian withholding tax (if a Belgian intermediary intervenes in the payment thereof), subject to such relief as may be available under applicable domestic or tax treaty provisions.

Belgian resident individuals

For Belgian resident individuals who acquire and hold Offer Shares as a private investment, the Belgian withholding tax levied on dividends fully discharges their personal income tax liability. Nevertheless, these resident individuals may elect to report the dividends in their personal income tax return. Also, if the dividends are paid outside of Belgium without the intervention of a Belgian paying agent, the dividends received (after deduction of any non-Belgian withholding tax) must be reported in the personal income tax return. Dividends that are reported this way will normally be taxable at the lower of the generally applicable 30% Belgian withholding tax rate on dividends or at the progressive personal income tax rates applicable to the taxpayer's overall declared income. If the beneficiary reports the dividends, the income tax due on such dividends will not be increased by local surcharges. In addition, if the dividends are reported, the Belgian withholding tax levied on the dividends may, in both cases, be credited against the personal income tax due and is reimbursable to the extent that it exceeds the personal income tax due, provided that the dividend distribution did not result in a reduction in value or a capital loss on Offer Shares. This condition is not applicable if the investor can demonstrate (i) that he or she has held the Offer Shares in full legal ownership for an uninterrupted period of 12 months prior to the attribution of the dividends or (ii) that, during that period, the Offer Shares have never been held in full legal ownership at any point in time by a taxpayer other than a) a company subject to Belgian corporate tax or b) a non-resident company having, in an uninterrupted manner, invested the Offer Shares in a Belgian establishment.

For Belgian resident individual investors who acquire and hold Offer Shares for professional purposes, the Belgian withholding tax does not fully discharge their income tax liability. Dividends received (after deduction of any non-Belgian withholding tax) must be reported by the investor and will, in such a case, be taxable at the investor's personal income tax rate increased with local surcharges. The Belgian withholding tax levied on dividends may be credited against the personal income tax due and is reimbursable to the extent that it exceeds the income tax due, subject to two conditions: (i) the taxpayer must own Offer Shares in full legal ownership at the time the dividends are paid or attributed and (ii) the dividend distribution may not result in a reduction in value of or a capital loss on Offer Shares. The latter condition is not applicable if the investor can demonstrate (i) that he or she has held the Offer Shares in full legal ownership for an uninterrupted period of 12 months prior to the attribution of the dividends or (ii) that, during that period, the Offer Shares have never been held in full legal ownership at any point in time by a taxpayer other than a) a company subject to Belgian corporate tax or b) a non-resident company having, in an uninterrupted manner, invested the Offer Shares in a Belgian establishment.

Belgian resident companies

Corporation tax

For Belgian resident companies (other than investment companies within the meaning of article 185bis of the Belgian Income Tax Code), the gross dividend income (after deduction of any non-Belgian withholding tax, but including the Belgian withholding tax) must be declared in the corporation tax return and will be subject to a corporation tax rate of 33.99%, unless reduced corporation tax rates apply.

Belgian resident companies can generally (although subject to certain limitations) deduct up to 95% of the gross dividend received from the taxable income, provided that at the time of a dividend payment or attribution: (i) the Belgian resident company holds Offer Shares representing at least 10% of the Company's share capital or a participation in the Company with an acquisition value of at least €2,500,000; (ii) the Offer Shares have been held or will be held in full ownership for an uninterrupted period of at least one year; and (iii) the conditions relating to the taxation of the underlying distributed income, as described in Article 203 of the Belgian Income Tax Code (the Article 203 ITC Taxation Condition) are met (together: the Conditions for the application of the dividend received deduction regime).

The conditions for the application of the dividend received deduction regime depend on a factual analysis and for this reason the availability of this regime should be verified upon each dividend distribution.

Any Belgian withholding tax levied on dividends may be credited against the corporation tax due and is reimbursable to the extent that it exceeds the corporation tax due, subject to two conditions: (i) the taxpayer must own the Offer Shares in full legal ownership at the time the dividends are paid or attributed and (ii) the dividend distribution may not result in a reduction in value of or a capital loss on the Offer Shares. The latter condition is not applicable if the company can demonstrate (i) that it has held the Offer Shares in full legal ownership for an uninterrupted period of 12 months prior to the attribution of the dividends or (ii) that during that period, the Offer Shares have never been held in full legal ownership at any point in time by a taxpayer other than a) a company subject to Belgian corporate tax or b) a non-resident company having, in an uninterrupted manner, invested the Offer Shares in a Belgian establishment.

Belgian withholding tax

Dividends distributed by a non-resident company to a Belgian resident company or a Belgian establishment of a foreign company resident in a Member State through a Belgian intermediary that must in principle withhold dividend withholding tax, will be exempt from Belgian withholding tax, subject to formalities related to the identification of the beneficiary of the dividends.

Other Belgian taxable legal entities

For taxpayers subject to the Belgium income tax on legal entities, the Belgian withholding tax levied on dividends in principle fully discharges their income tax liability. However, if the dividends are paid outside of Belgium without the intervention of a Belgian intermediary and without deduction of Belgian withholding tax, the entity itself is responsible for the deduction and payment of the 30% Belgian withholding tax.

Belgian non-resident individuals and companies

For non-resident individuals and companies, the Belgian withholding tax (if any) will be the only tax on dividends in Belgium, unless the non-resident holds the Offer Shares in connection with a business conducted in Belgium through a Belgian establishment.

If Offer Shares are acquired by a non-resident in connection with a Belgian establishment, the investor must report any dividends received, which will be taxable at the applicable non-resident individual or corporation tax rates, as appropriate. Belgian withholding tax levied on dividends (if any) may be credited against non-resident individual or corporation tax and is reimbursable to the extent that it exceeds the income tax due, subject to two conditions: (i) the taxpayer must own the Offer Shares in full legal ownership at the time the dividends are paid or attributed and (ii) the dividend distribution may not result in a reduction in value of, or a capital loss on, the Offer Shares. The latter condition is not applicable if the non-resident taxpayer can demonstrate (i) that it has held the Offer Shares in legal ownership for an uninterrupted period of 12 months prior to the attribution of the dividends or (ii) that, during that period, the Offer Shares have never been held in full legal ownership at any point in time by a taxpayer other than (a) a company subject to Belgian corporate tax or (b) a non-resident company having, in an uninterrupted manner, invested the Offer Shares in a Belgian establishment.

Non-resident companies whose Offer Shares are invested in a Belgian establishment may deduct up to 95% of the gross dividends included in their taxable profits if, at the date dividends are paid or attributed, the Conditions for the application of the dividend received deduction regime (see above) are met. Application of the dividend received deduction regime depends, however, on a factual analysis to be made upon each distribution, and its availability should be verified upon each distribution.

Capital gains and losses on Offer Shares

Belgian resident individuals

Capital gains realised on the disposal of Offer Shares by a private individual are taxable at 33% (plus local surcharges) if the capital gain is deemed speculative or realised outside the scope of the normal management of the individual's private estate. Moreover, capital gains realised by private individuals on the disposal of Offer Shares for consideration, outside the exercise of a professional activity, to a legal person that has its registered office, its principal establishment, or place of management outside the European Economic Area, are in principle taxable at a rate of 16.5% (plus local surcharges) if, at any time during the five years preceding the sale, the private individual has owned directly or indirectly, alone or with his/her spouse or with certain relatives, a substantial shareholding in the Company (i.e., a shareholding of more than 25%). Capital losses, however, are generally not tax deductible.

Belgian resident individuals who hold Offer Shares for professional purposes are taxable at the ordinary progressive personal income tax rates (plus local surcharges) on any capital gains realised upon the disposal of Offer Shares, except for Offer Shares held for more than five years, which are taxable at a separate rate of 16.5% (plus local surcharges). Capital losses on Offer Shares incurred by Belgian resident individuals who hold Offer Shares for professional purposes are in principle tax deductible.

Capital gains realised by Belgian resident individuals upon the redemption of Offer Shares or upon the liquidation of the Company will generally be taxable as a dividend (see above).

Belgian resident companies

Belgian resident companies (not qualifying as small companies within the meaning of Article 15 of the Belgian Companies Code) are subject to Belgian capital gains taxation at a separate rate of 0.412% on gains realised upon the disposal of Offer Shares, provided that: (i) the Article 203 ITC Taxation Condition is met and (ii) the Offer Shares have been held in full legal ownership for an uninterrupted period of at least one year. The 0.412% separate capital gains tax rate cannot be off-set by any tax assets (such as, *e.g.*, tax losses) and can moreover not be off-set by any tax credits.

Belgian resident companies qualifying as small companies (within the meaning of Article 15 of the Belgian Companies Code) are normally not subject to Belgian capital gains taxation on gains realised upon the disposal of the Offer Shares provided that (i) the Article 203 ITC Taxation Condition is met and (ii) the Offer Shares have been held in full legal ownership for an uninterrupted period of at least one year.

If the one-year minimum holding period condition would not be met (but the Article 203 ITC Taxation Condition is met) then the capital gains realised upon the disposal of Offer Shares by Belgian resident companies (both large or small companies) would be taxable at a separate corporation tax rate of 25.75%.

Capital losses on Offer Shares incurred by resident companies (both large or small companies) are as a general rule not tax deductible.

Offer Shares held in the trading portfolios of qualifying credit institutions, investment enterprises and management companies of undertakings for collective investment are subject to a different tax regime. The capital gains on such Offer Shares are taxable at the ordinary corporation tax rate of 33.99% and the capital losses on such Offer Shares are tax deductible. Internal transfers to and from the trading portfolio are assimilated to realisations.

However, in general, capital gains realised by Belgian resident companies upon the redemption of Offer Shares or upon the liquidation of the Company will, in principle, be subject to the same taxation regime as dividends (see above).

Other taxable legal entities

Belgian resident legal entities subject to the legal entities income tax are, in principle, not subject to Belgian capital gains taxation on the disposal of Shares, except in case of a sale of Offer Shares which are directly or indirectly part of a stake representing more than 25% of the share capital of the Company, which may, under certain conditions, give rise to tax at the rate of 16.5% (plus local surcharges). Capital losses on Offer Shares incurred by Belgian resident legal entities are not tax deductible.

Capital gains realised by Belgian resident legal entities upon the redemption of Offer Shares or upon the liquidation of the Company will in principle be taxed as dividends (see above).

Belgian non-resident individuals

Capital gains realised on the Offer Shares by a non-resident individual who has not acquired the Shares in connection with a business conducted in Belgium through a Belgium establishment are not subject to taxation, unless the gain is earned or received in Belgium and deemed to be realised outside the scope of the normal management of the individual's private estate (article 90, 1° of the BITC). In such case, it is subject to a final professional withholding tax of 30.28% (to the extent that Article 248 of the BITC is applicable). However, Belgium has concluded tax treaties with more than 95 countries which generally provide for a full exemption from Belgian capital gains taxation on such gains realised by residents of those countries. Capital losses are generally not tax deductible.

If capital gains or losses are realised on Offer Shares by a non-resident individual who holds Offer Shares in connection with a business conducted in Belgium through a Belgian establishment, those gains will be taxable at the ordinary progressive income tax rates and those losses will be tax deductible.

Capital gains realised by Belgian non-resident individuals upon the redemption of Offer Shares or upon the liquidation of the Company will generally be taxable as a dividend (see above).

Belgian non-resident companies or entities

Capital gains realised on the Shares by non-resident companies or non-resident entities that have not acquired the Shares in connection with a business conducted in Belgium through a Belgian establishment are not subject to taxation.

Capital gains realised by non-resident companies or other non-resident entities that hold the Shares in connection with a business conducted in Belgium through a Belgian establishment are generally subject to the same regime as Belgian similar entities.

Capital gains realised by Belgian non-resident individuals upon the redemption of Offer Shares or upon the liquidation of the Company will generally be taxable as a dividend (see above).

Tax on stock exchange transactions

Upon the issue of the new Shares (primary market transaction), no tax on stock exchange transactions is due. The purchase and the sale and any other acquisition or transfer for valuable consideration of existing Shares (secondary market transaction) concluded or executed in Belgium through a professional intermediary is subject to the tax on stock exchange transactions ("*taks op de beursverrichtingen / taxe sur les opérations de bourse"*) of 0.27% of the purchase price, capped at €1,600 per transaction and per party. A separate tax is due from each party to the transaction, both collected by the professional intermediary.

Since 1 January 2017, stock exchange tax is also due in case of a purchase and the sale and any other acquisition or transfer for valuable consideration of existing Shares (secondary market transactions) by a person who has their habitual residence in Belgium or a legal person with respect to its main seat or establishment in Belgium, even when the professional intermediary is not based in Belgium. In case of a foreign professional intermediary, the tax is collected voluntarily by the foreign intermediary, or, if that is not the case, must be remitted to the Belgian tax authorities by the Belgium-based ordering client. The professional intermediary may however elect to appoint a tax agent in Belgium who takes over the remittance obligation from the Belgium-based ordering client, in which case the tax is collected by the Belgian tax agent of the foreign professional intermediary.

No tax on stock exchange transactions is due on transactions entered into by the following parties, provided they are acting for their own account: (i) professional intermediaries described in Article 2.9° and 10° of the Belgian Law of August 2, 2002; (ii) insurance companies described in Article 2, §1 of the Belgian Law of July 9, 1975; (iii) pension institutions referred to in Article 2,1° of the Belgian Law of October 27, 2006 concerning the supervision on institutions for occupational pension; (iv) undertakings for collective investment; and (v) Belgian non-residents provided they deliver a certificate to their financial intermediary confirming their non-resident status.

The EU Commission adopted on February 14, 2013 the Draft Directive on a Financial Transaction Tax (FTT). The Draft Directive currently stipulates that once the FTT enters into force, the Participating Member States shall not maintain or introduce taxes on financial transactions other than the FTT (or VAT as provided in the Council Directive 2006/112/EC of November 28, 2006 on the common system of value added tax). For Belgium, the tax on stock exchange transactions should thus be abolished once the FTT enters into force. The Draft Directive is still subject to negotiation between the Participating Member States and therefore may be changed at any time.

20 GENERAL INFORMATION

20.1 Corporate resolutions

Prior to the Settlement Date, the Management Board, subject to approval of the Supervisory Board, will adopt a resolution to issue the New Offer Shares and to exclude all pre-emptive rights accruing to Shareholders in relation to the issuance of these Offer Shares.

20.2 Legal and arbitration proceedings

Neither the Company nor any of its Group companies are, or during the 12 months preceding the date of this Prospectus have been, involved in any governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Company is aware) that may have, or have had in the recent past, significant effects on the Company's and/or Group's financial position or profitability.

20.3 Material contracts

Set out below is a summary of (i) each material contract (other than a contract in the ordinary course of business) to which any member of the Group is a party which has been entered into within the two years immediately preceding the date of this Prospectus and that is still in force; and (ii) any other contract still in force (other than a contract in the ordinary course of business) entered into by any member of the Group which contains a provision under which any member of the Group has any obligation or entitlement which is material to the Group as at the date of this Prospectus.

Joint venture agreement with BASF

On 15 March 2016, Avantium and BASF announced that they signed a letter of intent and entered into exclusive negotiations to establish a joint venture. On 23 September 2016, Avantium and BASF signed the joint venture agreement (the Joint Venture Agreement).

The object and business scope of the Joint Venture is to engage in the business of (i) manufacturing and marketing of FDCA, (ii) marketing of PEF manufactured preferably under toll-manufacturing arrangements, (iii) the licensing of YXY Technology and (iv) the research and development within the field of the Joint Venture.

The Joint Venture aims to build and operate the Reference Plant for the production of FDCA for the purpose of (i) validating the YXY Technology, (ii) developing market demand for the Joint Venture's products including FDCA and PEF and (iii) developing a licensing engineering package to sell to third parties. Construction of the Reference Plant will be commissioned by, and the Reference Plant will be owned and operated by, a Belgian subsidiary (which will be a limited liability company under Belgian law) to be established by the Joint Venture. Upon its incorporation, the Belgian subsidiary will be wholly owned by the Joint Venture, except for one share that will be held by BASF (or an affiliate of BASF) and one share that will be held by the Group.

<u>*Legal form*</u>

The Joint Venture has the legal form of a limited partnership under Dutch law (*commanditaire vennootschap*) with (a subsidiary of) the Company and BASF as the two limited partners, holding a 49% equity share and a 51% equity share respectively. The name of the Joint Venture is Synvina C.V.

<u>*Management*</u>

The managing partner of the Joint Venture is a Dutch limited liability company (*besloten vennootschap*) Synvina B.V. (the **Managing Partner**). The Company and BASF respectively hold 49% and 51% of the shares in the capital of the Managing Partner. The Managing Partner has two statutory directors. One director is nominated by BASF and has the title of CEO (chief executive officer). The other director is nominated by the Company (as long as the Company holds at least a 25% equity stake in the Joint Venture) and has the title of COO (chief operating officer). The management team of the Joint Venture will be led by the CEO, whereby the COO, a commercial director (nominated by BASF) and a financial director (nominated by the Company) shall directly report to the CEO. On the date of this Prospectus, the CEO of the Managing Partner is Mr. Schiffers and the COO of the Managing Partner is Mr. Vreeken (formerly employed by Avantium) (see Chapter 13 "Management, Supervisory Board, Senior Management and Employees", section 13.10 "Board members of the Joint Venture"). The CEO is authorised to represent the Managing Partner individually and solely, the COO is authorised to represent the Managing Partner jointly with the CEO. The CEO shall be authorised to individually decide on any matters related to the daily conduct of the business of the Joint Venture. A schedule of authorisation or signing policy shall be established by the Joint Venture (subject to approval of the partners' meeting).

The Managing Partner carries out the day-to-day business, operations and management of the Joint Venture. All actions to be taken on behalf of the Joint Venture shall be taken by the Managing Partner. BASF nor Avantium have the authority to act on behalf of or to bind the Joint Venture.

<u>*Supervisory Board*</u>

The Managing Partner has a supervisory board composed of three members nominated by the Company and three members nominated by BASF. The chairman of the supervisory board is nominated by the Company (and has no special voting rights). Decisions of the supervisory board are in principle taken by a majority of the votes of all members which shall include the vote of at least one member of the supervisory board appointed by Avantium and one member of the supervisory board appointed by BASF. In the event of a deadlock, BASF or the Company may request that such matter shall be submitted to the general meeting of the Managing Partner or the partners' meeting of the Joint Venture.

On the date of this Prospectus, the supervisory board of the Managing Partner consists of:

J.M. van der Eijk – chairperson, nominated by the Company;

T.B. van Aken – nominated by the Company;

F.C.H. Roerink – nominated by the Company;

S. Blank – nominated by BASF;

T. Witzel – nominated by BASF; and

S.R. Deibel – nominated by BASF.

Partners' meeting or general meeting decision making

The partners' meeting of the Joint Venture is the ultimate authority of the Joint Venture, the general meeting of the Managing Partner is the ultimate authority of the Managing Partner. The Company and BASF have voting rights in these meetings, calculated in accordance with their interest in the Joint Venture and in the Managing Partner.

Prior to the date on which a positive plant investment decision is taken (FID), resolutions of the partners' meeting or general meeting may only be passed by unanimous agreement. Following the FID, all resolutions of the partners' meeting or general meeting shall be passed by simple majority of the votes, except in relation to certain reserved matters require an unanimous vote, unless BASF's or Avantium's equity interest is reduced below 25%. Such reserved matters include (without limitation) decisions regarding the issuance of partnership interests, dissolution of the Joint Venture, sale or other disposition of all or a substantial part of the Joint Venture's assets and the making of major investments. Certain matters require a majority vote of the general meeting or partners' meeting (to the extent not delegated to the supervisory board of the Managing Partner), such as (*inter alia*) decisions on the approval of the annual financial statements, approval and revision of the annual business plan and budget and entering into important sales, toll- and manufacturing contracts.

Formal investment decision

The Joint Venture Agreement provides for certain decision moments in relation to the Reference Plant., including a decision on plant capacity based on, amongst others, market assessment, customer feedback, process cost assessment and technology scaling aspects. The Joint Venture aims for a final investment decision (FID) in the fourth quarter of 2018 to construct the Reference Plant and to approve the associated capital expenditures. A positive FID will depend on the viability of the business case of the Joint Venture, based on a range of factors including basic engineering and technical feasibility, supply chain agreements and a final financing plan ensuring sufficient cash flow for the duration of the Joint Venture. The construction of the Reference Plant is expected to take over 24 months and the Reference Plant is expected to be operational in 2021. No assurance can be given with respect to the construction of the Reference Plant.

Funding of the Joint Venture

It is estimated that the construction of the Reference Plant with an expected production capacity of 50 kta FDCA will cost approximately €275-325 million, including start-up costs and initial working capital needs. Circa 50% of the costs are expected to be financed through debt. The Joint Venture could deviate from this debt ratio, for example if another mix of capital would benefit the business. A deviation is subject to unanimous shareholder approval.

The Joint Venture has in first instance been funded by way of capital contributions of a total amount of €18,000 by the Group and BASF in accordance with their equity interest.

The Group has initially contributed to the Joint Venture the IP in relation to the YXY Technology, the Pilot Plant, lab equipment relating to the YXY Technology and contracts (including employment contracts) relating to the YXY Technology. In addition, the Group has transferred a subsidy application to the Joint Venture. In return, the Group received an interest of 49% in the Joint Venture.

Initially, BASF has contributed and will contribute an amount equivalent to the cash demand of the Joint Venture for a period of twelve months commencing retroactively on 1 July 2016. Thereafter, BASF will contribute to the Joint Venture in several instalments a cash amount until construction of the Reference Plant commences. The total cash amount to be contributed by BASF for its 51% interest in this period is €57.2 million.

In case the positive FID is delayed beyond the fourth quarter of 2018, both Avantium and BASF shall fund the delay through additional equity contributions in accordance with their equity interest, provided that each of BASF and Avantium may use its exit right resulting in an exit event caused by the relevant party (see under "Exit rights, lock-up- and change of control provisions").

The Joint Venture shall require additional funding to construct the Reference Plant (FID Funding Amount). The FID Funding Amount shall consist of a combination of equity and debt funding. Following the FID, Avantium and BASF both have the obligation to provide equity funding for the FID Funding Amount in accordance with their equity interest. Avantium will allocate up to €65-75 million of the net proceeds of the Offering to comply with this funding requirement. In the event that the committed debt funding is not sufficient for the debt pool of the FID Funding Amount, Avantium and BASF are in principle obliged to provide additional shareholder loans to close such gap pro rata their respective equity share. In case the Group is unable to provide additional shareholder loans, it could ultimately, in agreement with BASF, accept the consequence of diluting its shareholding in the Joint Venture. In the event funding is required in addition to the FID Funding Amount, BASF, Avantium and the Joint Venture shall jointly define the excess funding amount required and shall seek and negotiate an excess funding package, mutually acceptable for BASF and Avantium. The formal decision on the FID Funding Amount, including the part funded through debt, is aimed to be taken in the fourth quarter of 2018 and also entails the formal approval for the construction of the Reference Plant.

In the event that the final FID Funding Amount exceeds the preliminary FID Funding Amount (established at the fourth quarter of 2017) by more than 25% or exceeds an amount of €400 million or in case insufficient debt is available, each of BASF and Avantium may exercise its exit right resulting in a neutral exit event (see under "Exit rights, lock-up- and change of control provisions").

The Joint Venture aims to be financially self-sufficient as from the moment it is able to successfully sell the FDCA produced by the Reference Plant to third parties.

The Managing Partner has a registered capital of €18,000. Avantium and BASF have subscribed and contributed the registered capital in according with their equity interest.

Proceeds from the Joint Venture

The Joint Venture will pay 20% of the Licence income to the Group until 2035 (Earn-out). Payments of Earn-outs might be deferred for a maximum of five years if such distribution (i) is not available from distributable annual profits and/or retained earnings or otherwise prohibited under Dutch law, (ii) would result in a negative balance of BASF's or Avantium's capital accounts or negative equity of the Joint Venture, or (iii) is in conflict with obligations under any financing agreement or liquidity planning of the Joint Venture. Earn-out payments have priority over dividend payments. In case Avantium dilutes its equity share in the Joint Venture to below 40%, the Group's entitlement to the Earn-out will be reduced according to a pre-determined schedule.

At least once per year, the Group and BASF will discuss the payment of any dividends, which will be distributed in accordance with the Joint Venture Partners' pro rata interests in the Joint Venture.

Exit rights, lock-up- and change of control provisions

Until the FID, both Joint Venture Partners have the right to initiate the unwinding of the Joint Venture. Regardless of the cause of such unwinding and regardless of who triggered such unwinding, the unwinding shall entail the Group purchasing and acquiring BASF's interest in the Joint Venture. The cause of any unwinding and whether the Group or BASF triggered such unwinding does *inter alia* influence the scope of any cash settlement between the parties after such unwinding, as summarised below.

In the event of an exit, the IP and assets in relation to the YXY Technology contributed by Avantium to the Joint Venture as well as the employees transferred shall be returned to Avantium. All cash remaining in the Joint Venture after settlement of all outstanding accounts payable of the Joint Venture shall be returned to BASF.

The Joint Venture Agreement provides for arrangements on an exit event caused by either BASF and Avantium.. In case of an exit caused by Avantium, Avantium shall pay BASF all cash spent by the Joint Venture over and above €10 million before 1 October 2017 and €15 million after 1 October 2017 plus its pro-rata share (in accordance with equity interest) of cash spent by the Joint Venture below these thresholds. Similar thresholds apply in case of an exit caused by BASF, provided that in such event Avantium only has to pay BASF its pro-rata share (in accordance with equity interest) of cash spent by the Joint Venture above these thresholds. Upon an exit, certain rights to the YXY Technology and related discounts may remain applicable. It is foreseen that any amount payable by Avantium following an exit can be paid out of cash of Avantium.

Both the Group and BASF may, under certain conditions, transfer their interest in the Joint Venture to a third party, albeit that during the first three years after incorporation of the Joint Venture, the party that wishes to sell its interest in the Joint Venture will be obliged to first offer its interest to the other Joint Venture partner who will be able to exercise a right of first refusal before being able to sell its interest to such third party.

In case either of the Joint Venture partners is acquired by a competitor of the Joint Venture or a substantial purchaser of PEF, the other Joint Venture partner has the option to sell its interest in the Joint Venture to such party. If the latter party rejects such purchase, the other party has the right to require the liquidation and dissolution of the Joint Venture.

In case a Joint Venture partner's interest in the Joint Venture is reduced below 25%, the other Joint Venture Partner shall have the option to purchase such interest.

Service level agreement

The Joint Venture and Avantium Support B.V. have entered into a framework service level agreement, pursuant to which the Group will provide and the Joint Venture will purchase certain facilities and services, such as the laboratory, IT services, HR services, IP services and administrative services. The services provided and the terms thereof are to be determined separately. Unless otherwise expressly provided, the fee consist of all operating costs plus 5%. The budget for the services provided will be reviewed and confirmed on an annual basis.

Lease agreements

Lease agreement regarding the Group's headquarters in Amsterdam

The Group leases its headquarters and laboratory at the Zekeringstraat in Amsterdam pursuant to a lease agreement of 11 May 2000, which was lastly renewed per 1 September 2014 for a period of twelve years and seven months, ending on 31 March 2027.

The annual rental fee at the start of the rental period amounted to €691,482, excluding annual service charges of €27,000.

Finance agreements

References made to Chapter 10, section 10.8 "Liquidity and capital resources" under "Borrowings".

Liquidity agreement

Reference is made to Chapter 17 "General Information", section 17.6 "Liquidity agreement with Kepler Cheuvreux S.A.".

Licence agreements

Licence agreement with Oronite

On 25 July 2008, Avantium Holding B.V. and Avantium Technologies B.V. entered into an agreement with Chevron Oronite Company LLC (Oronite) on a licence granted by Oronite to the Company (the Licence Agreement I). The Licence Agreement I was entered into following a dispute between Oronite and Avantium on an alleged breach by Oronite of a confidentiality agreement which was entered into by the same parties dated 18 October 2002 (the Confidentiality Agreement). The Company alleged that Oronite had breached the Confidentiality Agreement by misappropriating certain trade secrets the Company had provided to Oronite and by disclosing these trade secrets into several patents Oronite had registered in several jurisdictions (including the United States).

Under the terms of the Licence Agreement I, Oronite has granted to the Company (and its affiliates) a non-transferable, perpetual, worldwide, royalty-free right to practise the inventions which are claimed in the patents registered by Oronite (and which were part of the dispute on the alleged breach of the Confidentiality Agreement). Furthermore, the Company has granted to Oronite (and its affiliates) a non-transferable, non-exclusive right to practice the inventions which are claimed in the patents registered by the Company (but only within the field of fuel and lubricating oil additives and formulated fuels and lubricating oils).

Licence agreement with TU Delft

On 4 January 2016, Avantium Chemicals B.V. entered into a licence agreement with Technische Universiteit Delft (TU Delft, the Licence Agreement II). Avantium was granted European patents on a reactor assembly comprising one or more micro reactors. Avantium has the right to grant licences under these patents. TU Delft has constructed a reactor assembly comprising six micro reactors for catalyst development. The Licence Agreement II was entered into following a dispute between the Company and TU Delft. The Company alleged that the micro reactor of TU Delft constituted an infringement of certain of its patents. Under the Licence Agreement II, the Company has granted TU Delft a non-exclusive, royalty-free licence for research purposes.

Underwriting Agreement

Reference is made to Chapter 17 "Plan of Distribution", section 17.2 "Underwriting Agreement".

Convertible Loans

On 25 March 2016, the Company, PMV and FPIM and certain of its existing Shareholders, including Sofinnova, Capricorn, ING Participaties, Navitas, Aster II and Timber Invest 1 (together, the **CLA Lenders**) entered into a subordinated convertible loans agreement (the **CLA**) for the principal amount of €20 million. Pursuant to the CLA, the Company may solely apply the proceeds of the Convertible Loans to (i) further upscale and commercialise the YXY Technology, (ii) finance the construction of the Reference Plant with the objective to commercially produce FDCA and the Company's Renewable Chemistries division and to (iii) develop a licence strategy with respect to the subsequent industrial scale manufacturing of FDCA through the Joint Venture.

The Convertible Loans accrue (non-compounded) interest of 12% per annum. The Convertible Loans, together with accrued and unpaid interest, can be converted into Shares at the option of each of the CLA Lenders: (i) in the event that prior to 31 December 2021 (the Maturity Date) an exit (such as an initial public offering) or an external private round of financing of at least €40 million is determined to take place at a conversion price equal to the price per Share less 25%; and (ii) on the Maturity Date, in the absence of an exit or external private round as referred to under (ii) at a conversion price to be based on the fair value of the Shares on the Maturity Date.

In the event that, in connection to the aforementioned conversion events, the Company requests any of the CLA Lenders to exercise its conversion right and such Lender does not exercise such right, the Company can in principle terminate the CLA under the obligation to repay the principal amount under the relevant Convertible Loan, together with accrued and unpaid interest, plus a break-up fee of 3% of the principal amount in case of a termination prior to the Maturity Date, to the Lender (taking into account the subordination to certain existing senior debt). Certain CLA Lenders have irrevocably committed to convert their entire loan into Shares at Settlement.

20.4 Related party transactions

For information regarding related party transactions, reference is made to the information set forth in note 27 of page F-40 of the FY 2015 Financial Information included in Chapter 22 "Index to the Financial Statements". No related party transactions have occurred in the period as of 30 September 2016 until the date of this Prospectus, other than entering into the Joint Venture Agreement and the service level agreement as described in Chapter 20 "General information" section 20.3 "Material contracts.

20.5 Availability of documents

Subject to applicable laws and transfer restrictions (see Chapter 18 "Selling and Transfer Restrictions"), the following documents (or copies thereof) may be obtained free of charge from the Company's website for at least twelve months following the date of this Prospectus (www.avantium.com):

- this Prospectus, including the Financial Information; and
- the Articles of Association (in Dutch and an unofficial English translation).

In addition, copies of these documents will be available free of charge at the Company's offices during normal business hours from the date of this Prospectus until at least the Settlement Date.

20.6 Legal structure

The Company is the parent company of a group of operating companies. The principal assets of the Company are the equity interests it directly or indirectly holds in its operating subsidiaries and the Joint Venture. The chart below sets out the structure of the Group.

Subsidiaries

The following table provides an overview of the Company's subsidiaries as of the date of this Prospectus.

Subsidiaries	**Country of incorporation**	**Percentage held by the Company**
Avantium Technologies B.V.	the Netherlands	100 %
Avantium Support B.V.	the Netherlands	100%
Avantium Cleantech B.V.	the Netherlands	100%
Avantium Chemicals B.V.	the Netherlands	100%
Avantium Knowledge Centre B.V.	the Netherlands	100%
Feedstock Technologies B.V.	the Netherlands	100%
Furanix Technologies B.V.	the Netherlands	100%
YXY Technologies B.V.(1)	the Netherlands	100%

(1) This subsidiary has transferred the assets and liabilities relating to the YXY Technology to the Joint Venture and is currently empty.

Affiliates

The following table provides an overview of the Group's participation in other undertakings as of the date of this Prospectus in which it does not exercise control.

Affiliates	Registered office and country of incorporation	Percentage held by the Group
Synvina B.V.	the Netherlands	49%

The participation in the Joint Venture is accounted for using the equity method. The total book value of this participation as per 30 November 2016 is €55.0 million**.**

20.7 Statutory accounts

The consolidated statutory financial statements of the Company for FY 2015, FY 2014 and FY 2013 have been audited by PwC, independent auditors, and have been filed with the Dutch Chamber of Commerce.

PwC is an independent registered audit firm. The address of PwC is Thomas R. Malthusstraat 5, 1066 JR Amsterdam, the Netherlands. The auditor who has signed the auditor’s statements in respect of the statutory accounts of the Company on behalf of PwC is a member of the Netherlands Institute of Chartered Accountants (*Nederlandse Beroepsorganisatie van Accountants*).

20.8 Governing law and competent courts

This Prospectus and the Offering are governed by Dutch law. All disputes arising in connection with this Prospectus and the Offering shall be subject to the non-exclusive jurisdiction of the courts in Amsterdam, the Netherlands.

21 GLOSSARY OF SELECTED TERMS

The following definitions are used in this Prospectus:

21.1 Certain general terms

9M 2015	Nine-month period ended 30 September 2015
9M 2016	Nine-month period ended 30 September 2016
9M Financial Information	The unaudited interim consolidated condensed financial statements of the Group as at and for the nine-month period ended 30 September 2016 (with comparative figures as at and for the nine-month period ended 30 September 2015), including the notes thereto and the auditor's review report thereon
Admission	The admission to listing and trading of the Shares on Euronext Amsterdam and Euronext Brussels
AFM	The Netherlands Authority for the Financial Markets (*Stichting Autoriteit Financiële Markten*)
ALPLA	ALPLA Werke Alwin Lehner GmbH & Co Kg
Articles of Association	The articles of association of the Company as they will read after the Capital Restructuring as of the Settlement Date
Aster II	FCPR Aster II
Avantium Foundation	Stichting Administratiekantoor Avantium
AKZO Nobel	AKZO Nobel Industrial Chemicals B.V.
BASF	BASF Nederland B.V.
British Pound, GB£ or GBP	The British Pound, the lawful currency in the UK
Capital Restructuring	The restructuring of the share capital of the Company on the Settlement Date as described in Chapter 8 "Capitalisation and Indebtedness"
Capricorn	Capricorn Cleantech Fund N.V.
Catalysis	The Group's catalysis R&D services and systems business
CCO	Chief Commercial Officer
CET	Central European Time
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CLA	The subordinated convertible loans agreement as described in Chapter 20 "General Information", section 20.3 "Material contracts"
CLA Lenders	The lenders under the CLA
Co-Lead Manager	Oddo et Cie S.C.A. is acting as co-lead manager in the Offering
Company or Avantium	Avantium N.V. (which at the date of this Prospectus is still a private company with limited liability (*besloten vennootschap met beperkte aansprakelijkheid*) named Avantium Holding B.V., to be converted into a public company with limited liability (*naamloze vennootschap*) prior to Settlement pursuant to a notarial deed of amendment of the articles of association and conversion
Conversion	The conversion of the Company into a public company with limited liability (*naamloze vennootschap*) pursuant to a notarial deed of amendment and conversion to be executed prior to Settlement
Convertible Loans	The convertible loans that will be converted into 2,704,883 Shares upon Settlement

Cornerstone Investors	The CLA Lenders from which the Company has received an unconditional and irrevocable commitments to subscribe for Offer Shares and certain other investors from which the Company has received firm intentions to participate in the Offering and to subscribe for Offer Shares
Danone	Danone S.A. and Danone Research
DCC	Dutch Civil Code
Distributable Equity	The part of the Company's equity which exceeds the sum of the paid-in and called-up share capital plus the reserves as required to be maintained by Dutch law or by the Articles of Association
Dutch Code	The Dutch corporate governance code issued on 9 December 2003 and amended as per 1 January 2009
€ or **euro**	The lawful currency of the European Economic and Monetary Union
EC	European Commission
Enterprise Chamber	The Enterprise Chamber of the Amsterdam Court of Appeal (*Ondernemingskamer van het Gerechtshof te Amsterdam*)
EU	European Union
Euroclear Nederland	Nederlands Centraal Instituut voor Giraal Effectenverkeer B.V.
Euronext	Euronext Amsterdam and Euronext Brussels
Euronext Amsterdam	Euronext Amsterdam, a regulated market of Euronext Amsterdam N.V.
Euronext Brussels	Euronext Brussels, a regulated market of Euronext Brussels NV/SA
FDA	Food and Drugs Administration
Financial Information	The consolidated financial statements contained in Chapter 22 "Index to the Financial Statements", including the notes thereto
First Trading Day	15 March 2017, the date on which trading on an "as-if-and-when-issued-and/or-delivered" basis in the Shares on Euronext Amsterdam is expected to commence
FPIM	SFPI-FPIM SA/NV
FRSA	Dutch Financial Reporting Supervision Act (*Wet toezicht financiële verslaggeving*)
FSA	Dutch Financial Markets Supervision Act (*Wet op het financieel toezicht*)
FSMA	The Belgian Financial Services and Markets Authority (*Autoriteit voor Financiële diensten en Markten*)
FTE	Full time equivalents employed by the Group
FY 2013	Fiscal year ended 31 December 2013
FY 2014	Fiscal year ended 31 December 2014
FY 2015	Fiscal year ended 31 December 2015
FY Financial Information	The audited consolidated financial statements of the Group as at and for the fiscal years ended 31 December 2015, 31 December 2014 and 31 December 2013, including the notes thereto and the auditor's report thereon
General Meeting	General meeting of shareholders of the Company, being the corporate body, or where the context so requires, the physical meeting of Shareholders
Group	The Company and its subsidiaries (for the avoidance of doubt not including the Joint Venture)
IFRS	International Financial Reporting Standards as adopted by the European Union

Increase Option	The option to, prior to the allocation of the Offer Shares, increase the maximum number of New Offer Shares by up to 15%, up to a total of 9,353,143 New Offer Shares
Increase Shares	The New Offer Shares offered pursuant to the exercise of the Increase Option (if any)
ING	ING Bank N.V., acting through its corporate finance division
ING Participaties	ING Corporate Investments Participaties B.V.
Joint Global Coordinators	ING and KBC Securities in their capacity as joint global coordinators and joint book runners
Joint Venture	The joint venture in which Avantium holds 49% and BASF holds 51% of the share capital
Joint Venture Agreement	The agreements entered into by Avantium and BASF in connection with the Joint Venture
KBC Securities	KBC Securities NV/SA
Listing and Paying Agent	ING
Lock-up	The lock-up arrangements of the Company's existing Shareholders under which these Shareholders agree not to sell their Shares and options for a lock-up period of 360 days, with the right of the Underwriters to waive the lock-up after a period of 180 days
Management Board	The management board (*raad van bestuur*) of the Company
Management Board Regulations	The set of regulations concerning the Management Board
Management Shares	The Shares that will be offered by the Avantium Foundation on behalf of the Managers in the Offering
Management Team	The Management Board and Senior Management
Managers	The Company's CEO, CFO and CTO who are offering the Management Shares through the Avantium Foundation
Managing Partner	The managing partner of the Joint Venture
Member States	The Member States of the European Economic Area
Mitsui	Mitsui & Co. Ltd.
Navitas	Navitas B.V.
New Offer Shares	The Shares that will be offered and issued by the Company in the Offering including, unless the context indicates otherwise, the Increase Shares and the Over Allotment Shares
Oaklins	Oaklins Equity ECM Advisory B.V.
Offer Price	The offer price of €11.00 per Offer Share
Offer Shares	The New Offer Shares, including the Increase Shares and the Over-Allotment Shares (if any), and the Management Shares
Offering	The public offering of the Offer Shares to institutional and retail investors in the Netherlands and Belgium and the private placement to certain institutional investors in various other jurisdictions
Offering Period	The period during which the Offering will take place, commencing on 09:00 CET on 6 March 2017 and ending on 17:30 CET on 13 March 2017, subject to acceleration or extension of the timetable for the Offering
Offering Statement	The statement detailing the exact numbers of the Offer Shares to be issued and sold and the maximum number of Over-Allotment Shares, which will be deposited with the AFM

Over-Allotment Option	The option to be granted to the Joint Global Coordinators, exercisable within 30 calendar days after the Settlement Date, pursuant to which the Joint Global Coordinators, may require the Company to issue additional Shares at the Offer Price
Over-Allotment Shares	The Offer Shares that may be made available pursuant to the Over-Allotment Option (if any)
Pharma business	The holding company Zwarte Zwaan Holding B.V. (dissolved in 2015) and the crystallisation systems business as conducted in Avantium Pharmatech B.V., sold to the Technobis Group B.V. effectively per 31 December 2014
PMV	PMV-TINA Comm. VA
Prospectus	This prospectus dated 3 March 2017
Prospectus Directive	Directive 2003/71/EC and amendments thereto, including those resulting from Directive 2010/73/EU
PwC	PricewaterhouseCoopers Accountants N.V.
Rabobank	Coöperatieve Rabobank U.A.
Regulation S	Regulation S under the US Securities Act
Renewable Chemistries	The Group's development projects in the area of renewable chemistry
RWE	RWE Generation NL B.V.
Senior Management	Employees of the Group who are relevant to establishing that the Company has the appropriate expertise and experience for the management of the Company's business
Settlement	Payment (in euro) for and issue and delivery of the Offer Shares
Settlement Date	The date on which Settlement occurs which is expected to be on or about 16 March 2017, subject to acceleration or extension of the timetable for the Offering
Shareholders	A holder of Shares
Share Lending Agreement	The share lending agreement expected to be dated 3 March 2017 between ING Corporate Investments Participaties B.V. and the Stabilisation Agent
Shares	The ordinary shares in the Company's share capital, with a nominal value of €0.10 per share, issued from time to time
Sofinnova	FCPR Sofinnova Capital VI
Stabilisation Agent	ING
Supervisory Board	The supervisory board (*raad van commissarissen*) of the Company
Supervisory Board Regulations	The set of regulations concerning the Supervisory Board
TCCC	The Coca-Cola Company
The Netherlands	The part of the Kingdom of the Netherlands located in Europe
Timber Invest 1	Timber Invest 1 Coöperatief U.A.
UK	The United Kingdom
Underwriters	Each of the Joint Global Coordinators and the Co-Lead Manager
Underwriting Agreement	The underwriting agreement expected to be dated 14 March 2017 among the Company, the Avantium Foundation and the Underwriters
US or **United States**	United States of America
US dollar, US$ or **USD**	The US Dollar, the lawful currency in the US
US Securities Act	The United States Securities Act of 1933, as amended

Warrants	The right of each Cornerstone Investor who will subscribe for Offer Shares for at least €5 million to receive one warrant for every four Offer Shares subscribed for in connection with its irrevocable commitment or firm intention, entitling it to acquire one Share per warrant for an exercise price of 125% of the Offer Price during the exercise period
WBSO	Research and development wage tax deductions
YXY Technology	The business to catalytically convert plant-based sugars into biobased chemicals and plastics which is conducted in the Joint Venture

21.2 Certain technical terms

CAGR	Compound annual growth rate
catalysis	The acceleration of a chemical reaction by means of a chemical substance, called a catalyst, which is itself not consumed by the overall reaction
Catalyst	A chemical substance that accelerates a chemical reaction, but that is not consumed by the overall reaction
CMO-regulation	EU Regulation 1308/2013 establishing a common organisation of the markets in agricultural products
cost-effective	Economic analysis that compares the relative costs and outcomes (effects) of two or more products, processes etc.
CSD	Carbonated soft-drinks
Earn-out	The payments by the Joint Venture to the Group in connection with the sale of Licences as set out in the Joint Venture Agreement
EFSA	The European Food Safety Authority
EPBP	The European PET Bottle Platform
FCN	Food Contact Notifications
FDCA	The chemical product 2.5-furan dicarboxylic acid, a sugar based monomer, part of the furanics family, that can be used to produce polyesters
FID	The formal approval for the construction of the Reference Plant and approval of the associated capital expenditures, depending, amongst others, on the viability of the business case of the Joint Venture, based on a range of factors including basic engineering and technical feasibility, supply chain agreements and a final financing plan ensuring sufficient cash flow for the duration of the Joint Venture.
First generation (1G) feedstock	Feedstock based on plant based materials which are also used for food and feed production
fossil or non-renewable resources	Natural resources, such as petroleum and gas, which are finite
GHGs	Greenhouse gases
HDPE	High-density poly-ethylene
HFCS	High-fructose corn syrup
Hot fill	A bottle filling process in which the contents of the plastic bottle to be packaged are heated in order to sterilize the product prior to being poured into the bottle
IP	Intellectual property rights
kta	Kilo tons per annum

Licences	Licences granted by the Joint Venture to third parties in respect of the production, manufacturing and/or application of the YXY Technology
MEG	Mono-ethylene glycol
monomer	A molecule that may bind chemically or supramolecularly (so called polymerisation) to other molecules to form a polymer
ML	Methyl levulinate, a building block for numerous biobased applications
MMF	Methoxymethyl furfural (an alkoxymethyl-furfural)
Nameplate capacity	The intended full-load sustained output of a facility such as a chemical plant, not necessarily indicating the actual output
PEF	Polyethylene-furanoate, a bio based polymer, which can be used for packaging of soft drinks, water, alcoholic beverages, fruit juices, food and non-food products and film and fibre applications
PET	Polyethylene terephthalate, a widely used polyester, terephthalic acid, a petroleum-based monomer, used for the production of plastic bottles for beverages, liquid containers and synthetic fibres
Pilot Plant	The YXY Technology dedicated pilot plant at the Chemelot Campus in Geleen, the Netherlands
pilot plant stage	The development stage where the chemical process is proven at a larger scale, the business case is further validated, partnerships are confirmed and/or pilot plant is designed
Plastics Regulation	EC Regulation 10/2011 on plastic materials and articles intended to come into contact with food, as amended from time to time
Project Mekong	A project to produce MEG from glucose in one step instead of the currently existing multiple step production process
Project Zambezi	A project to develop a process for producing cost-competitive glucose from 2G feedstock
PTA	Fossil-based terephthalic acid
R&D	Research and development
Reference Plant	The first commercial FDCA plant to be built by the Group in Antwerp, Belgium, with the aim to commercially deploy the YXY Technology in a Joint Venture together with BASF
RMF	Alkoxymethyl-furfural
Second generation (2G) feedstock	Feedstock based on waste material, such as wood chips and bagasse
Tg	The glass transition temperature
Tm	The melting temperature
Toll manufacturing	An arrangement in which a company which has specialised equipment processes raw materials or semi-finished goods for another company

22 INDEX TO THE FINANCIAL STATEMENTS

INTERIM CONSOLIDATED CONDENSED FINANCIAL INFORMATION FOR THE PERIOD ENDED 30 SEPTEMBER 2016

INTERIM CONSOLIDATED CONDENSED STATEMENT OF COMPREHENSIVE INCOME

in Euro x 1,000	YTD Q3	
	2016	**2015**
Continuing operations		
Revenues	6,148	7,008
Expenses		
Direct selling expenses	(1,088)	(858)
Employee benefit expenses	(4,922)	(5,661)
Depreciation, amortization and impairment charge	(577)	(447)
Office and housing expenses	(1,458)	(1,232)
Patent, license, legal and advisory expenses	(1,732)	(622)
Laboratory expenses	(816)	(784)
Marketing and representation expenses	(498)	(425)
Other operating expenses	(320)	(35)
Operating loss	**(5,263)**	**(3,056)**
Finance income	-	79
Finance costs	(1,433)	(209)
Finance costs - net	**(1,433)**	**(130)**
Loss before income tax	**(6,696)**	**(3,185)**
Income tax expense	-	-
Loss from continuing operations	**(6,696)**	**(3,185)**
Loss from discontinued operations	**(5,352)**	**(7,022)**
Loss for the period ended Q3 FY16	**(12,048)**	**(10,208)**
Total comprehensive income for the period	**(12,048)**	**(10,208)**
Loss attributable to:		
Owners of the parent	(12,048)	(10,208)
Non-controlling interests	-	-
	(12,048)	**(10,208)**
Total comprehensive income attributable to:		
Owners of the parent	(12,048)	(10,208)
Non-controlling interests	-	-
	(12,048)	**(10,208)**

Earnings per share - attributable to the ordinary equity holders of the company	**30 September 2016 (€ cents)**	**30 September 2015 (€ cents)**
Basic / Dilutive earnings per share for profit from continuing operations	(5.08)	(2.42)
Basic / Dilutive earnings per share for profit from discontinued operations	(4.06)	(5.33)
Basic/ Dilutive earnings per share - total	(9.14)	(7.74)

INTERIM CONSOLIDATED CONDENSED STATEMENT OF FINANCIAL POSITION

in Euro x 1,000	**30 September 2016**	**31 December 2015**
Assets		
Non-current assets		
Property, plant and equipment	3,767	4,017
Intangible assets	325	359
Total non-current assets	**4,092**	**4,376**
Current assets		
Inventories	985	1,045
Trade and other receivables	6,248	5,086
Cash and cash equivalents	13,852	6,981
Total current assets	**21,085**	**13,112**
Assets held for sale	7,943	5,424
Total assets	**33,120**	**22,913**
Liabilities		
Non-current liabilities		
Borrowings	3,758	3,600
Total non-current liabilities	**3,758**	**3,600**
Current liabilities		
Borrowings	22,409	400
Trade and other payables	8,338	6,196
Provisions for other liabilities and charges	175	168
Total current liabilities	**30,923**	**6,764**
Liabilities related to assets held for sale	-	3,190
Total liabilities	**34,681**	**13,555**
Equity		
Equity attributable to owners of the parent		
Ordinary shares	1,319	1,319
Share premium	81,272	81,272
Other reserves	6,070	5,266
Retained earnings	(90,223)	(78,499)
Total equity attributable to the owners of the parent	(1,562)	9,358
Non-controlling interest	-	-
Total equity	**(1,562)**	**9,358**
Total equity and liabilities	**33,120**	**22,913**

INTERIM CONSOLIDATED CONDENSED STATEMENT OF CHANGES IN EQUITY

in Euro x 1,000

	Attributable to equity holders of the company						
	Ordinary shares	**Share premium**	**Other reserves**	**Retained earnings**	**Total**	**Non-controlling interest**	**Total equity**
Balance at 1 January 2015	**1,319**	**81,272**	**5,207**	**(66,784)**	**21,014**	**517**	**21,531**
Comprehensive income							
Result for the period	-	-	-	(10,208)	(10,208)	-	(10,208)
Other Comprehensive income for the period					-		-
Total Comprehensive income at 30 September 2015	-	-	**-**	**(10,208)**	**(10,208)**	**-**	**(10,208)**
Transactions with owners							
- Employee share schemes – value of Employee services	-	-	586	-	586	-	
- Transfer value share scheme to retained earnings	-	-	(593)	593	-	-	-
- Issue of ordinary shares	-	-	-	-	-	-	-
- Transactions with non-controlling interests	-	-	-	517	517	(517)	-
Total transactions with owners	**-**	**-**	**(8)**	**1,110**	**1,103**	**(517)**	**586**
Balance at 30 September 2015	**1,319**	**81,272**	**5,200**	**(75,882)**	**11,909**	**0**	**11,909**
Balance at 1 January 2016	**1,319**	**81,272**	**5,266**	**(78,499)**	**9,358**	**0**	**9,358**
Comprehensive income							
Result for the period	-	-	-	(12,048)	(12,048)	-	(12,048)
Other Comprehensive income for the period					-		-
Total Comprehensive income for the period	-	-	**-**	**(12,048)**	**(12,048)**	**-**	**(12,048)**
Transactions with owners							
- Employee share schemes – value of Employee services	-	-	1,128	-	1,128	-	-
- Transfer value share scheme to retained earnings	-	-	(324)	324	-	-	-
- Issue of ordinary shares	-	-	-	-	-	-	-
- Transactions with non-controlling interests	-	-	-	-	-	-	-
Total transactions with owners	**-**	**-**	**804**	**324**	**1,128**	**-**	**1,128**
Balance at 30 September 2016	**1,319**	**81,272**	**6,070**	**(90,223)**	**(1,562)**	**0**	**(1,562)**

INTERIM CONSOLIDATED CONDENSED STATEMENT OF CASH FLOWS

in Euro x 1,000	YTD Q3	
	2016	**2015**
Cash flows from continuing operations		
Cash flows from operating activities		
Loss for the period from continuing operations	(6,696)	(3,185)
Adjustments for:		
- Depreciation	487	406
- Amortization	90	41
- Share-based payment	1,128	586
- Finance costs - net	1,433	130
Changes in working capital:		
- (Increase) / decrease in inventories	60	(283)
- (Increase) / decrease in trade and other receivables	(1,162)	2,711
- Increase / (decrease) in trade and other payables	2,142	(3,359)
- Increase / (decrease) in provisions	7	(372)
	(2,512)	(3,325)
Interest (paid)	(2)	(9)
Net cash used in operating activities	(2,514)	(3,334)
Cash flows from investing activities		
Purchases of property, plant and equipment (PPE)	(244)	(1,625)
Purchases of intangible assets	(56)	(31)
Net cash used in investing activities	(300)	(1,656)
Cash flow from financing activities		
Interest received	-	44
Convertible bond	20,000	-
Net cash generated from financing activities	20,000	44
Net increase / (decrease) in cash and cash equivalents	**17,186**	**(4,946)**
Cash and cash equivalents at beginning of the year	6,981	19,140
Effect of exchange rate changes	(0)	35
Cash and cash equivalents from continuing operations at end of period	**24,168**	**14,230**
Cash flows from discontinued operations		
Net cash from/ (used in) operating activities	(7,578)	(2,403)
Net cash from/ (used in) investing activities	(2,738)	-
Net cash from/ (used in) financing activities	-	(4,000)
Change in cash from discontinued operations	**(10,316)**	**(6,403)**
Cash and cash equivalents at end of period	**13,852**	**7,827**

NOTES TO THE INTERIM CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

1 Significant changes in the current reporting period

On the 25th of March 2016, Avantium Holding B.V. (borrower) entered into a subordinated convertible loans agreement in the principal amount of Euro 20 million. The convertible loans agreement (CLA), has the intention to: (i) enable the borrower to further upscale and commercialize the YXY technology, to (ii) finance (a) the construction of a reference plant with the objective to commercially produce FDCA and (b) the borrower's renewable chemistries division, and (iii) develop a license strategy with respect to the subsequent industrial scale manufacturing of FDCA, the foregoing anticipated to be realized through the formation of a joint venture with BASF. Reference is made to note 4 for further disclosure on the fair value measurement of the company's financial assets and liabilities.

On 23 September 2016, Avantium Holding B.V. and BASF SE signed the Joint Venture agreement. The new entity is named Synvina C.V., and is incorporated in the Netherlands. The establishment of this deal has taken place in the fourth quarter of 2016, at 30 November 2016, after which the transaction result will be recorded.

2 Segment information

The main KPI of the company within the profit & loss account is an adjusted EBITDA figure. Note that the Adjusted EBITDA number excludes overhead. The adjusted EBITDA is calculated in the following manner:

Operating profit / loss + depreciation & amortization -/- CAPEX

in Euro x 1,000	**YTD Q3 2016**	**2015**
Catalysis	1,253	1,665
Renewable Chemistries	(732)	(1,016)
YXY	(7,987)	(6,021)
Total adjusted EBITDA	**(7,466)**	**(5,372)**

b) Revenues per segment

in Euro x 1,000	**YTD Q3 2016**	**2015**
Catalysis	6,148	7,008
Renewable Chemistries	-	-
YXY	319	220
Total segment revenue	**6,467**	**7,228**

c) Reconciliation

in Euro x 1,000	**YTD Q3 2016**	**2015**
Total adjusted EBITDA	**(7,466)**	**(5,372)**
Amortisation	(90)	(41)
Depreciation	(589)	(1,701)
Finance costs - net	(1,433)	(2,480)
CAPEX	3,037	1,657
Share based compensation	(1,128)	(586)
Rent	(892)	(694)
Release decommissioning provision	-	277
Results of discontinued operation	5,352	7,022
Other	(3,487)	(1,268)
Profit before income tax from continuing operations	**(6,696)**	**(3,185)**

3 Discontinued operations

The discontinued operations in 2016 and 2015 consist of YXY Technologies B.V. and Furanix B.V., while the three quarters ending 30 September 2015 also contains the result of the sale of Avantium Pharmatech B.V. which was completed on the 8th of January 2015.

Assets of disposal group classified as held for sale

in Euro x 1,000	**30 September 2016**	**31 December 2015**
Assets		
Property, plant and equipment	7,546	4,903
Intangible assets	-	-
Inventory	396	406
Trade and other receivables	-	116
Total assets	**7,943**	**5,424**

Liabilities of disposal group classified as held for sale

in Euro x 1,000	**30 September 2016**	**31 December 2015**
Liabilities		
Innovation loan - Accrued interest	-	736
Trade and other payables	-	2,454
Provisions	-	-
Total liabilities	**-**	**3,190**

Statement of comprehensive income

in Euro x 1,000	**YTD Q3 2016**	**YTD Q3 2015**
Discontinued operations		
Revenues	319	220
Expenses	(5,671)	(9,101)
Other income	-	1,859
Operating profit	**(5,352)**	**(7,022)**
Income tax expense	-	-
Loss for the period	**(5,352)**	**(7,022)**

Cash flow statement

in Euro x 1,000	**YTD Q3 2016**	**YTD Q3 2015**
Net cash used in operating activities	(7,578)	(2,403)
Net cash used in investing activities	(2,738)	-
Net cash used in financing activities	-	(4,000)
Net decrease in cash	**(10,316)**	**(6,403)**

4 Fair value measurement of financial assets and financial liabilities

The fair value of financial assets and financial liabilities is included at the amount at which the instrument could be exchanged in a current transaction between knowledgeable willing parties, other than in forced or liquidation sale. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The fair value hierarchy defines a three-level valuation hierarchy for disclosure of fair value measurements as follows:

- *Level 1:* Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.
- *Level 2:* Observable inputs that reflect quoted prices for identical assets or liabilities in markets that are not active; quoted prices for similar assets or liabilities in active markets; inputs other than quoted prices that are observable for the assets or liabilities; or inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- *Level 3:* Unobservable inputs reflecting the Company's own assumptions incorporated in valuation techniques used to determine fair value. These assumptions are required to be consistent with market participant assumptions that are reasonably available.

The carrying amounts of cash and cash equivalents, trade receivables, trade payables and other receivables and payables reported in the condensed consolidated statement of financial position approximate their respective fair values because of the short term nature of these instruments.

Furthermore, the current and non-current borrowings, which include the convertible loans agreement as disclosed in note 1, approximate their respective fair values. The fair value of non-current liabilities was estimated through Level 2 of the fair value hierarchy. Due to the fact that the convertible loans agreement is expected to be settled in its normal operating cycle, it is recorded as a current liability in the condensed statement of financial position.

5 Going concern

The net loss for the three quarters ended 30 September 2016 amounts to Euro 12.0 million, and in anticipation of the Annual Meeting's adoption of the annual accounts after the year-end audit 2016, this has been added to the accumulated deficit resulting in a negative equity balance of Euro 1.6 million. Our cash balance however increased by Euro 20 million in 2016 by the issuance of the convertible loans agreement as outlined in note 1, resulting in a cash position at 30 September 2016 of Euro 13.9 million. Furthermore, the company will be reimbursed, after closing of the JV agreement on the 30th of November, by Synvina in the amount of Euro 3.8 million, as disclosed in paragraph 6, subsequent events. The company did not make use of the credit facility of Euro 2.0 million with ABN AMRO Bank and will keep the facility as an additional buffer. The company complies at 30 September 2016 with the solvability ratio as agreed with ABN AMRO Bank.

Also for the remainder of 2016 and 2017 the Group anticipates on a net loss including negative operating cash flows, but as a result of the funding activities anticipated and strict working capital management the Group has maintained its short-term and medium-term liquidity position. We believe that the anticipated cash flows of our services and systems business and new funding of Euro 20 million finalized in March 2016, as outlined in note 1, are sufficient to meet the requirements for working capital, capital expenditures and R&D for at least the next twelve months from the date of this report. The Group therefore continues to adopt the going concern basis in preparing its consolidated financial statements.

6 Events occurring after the reporting period

On November 22, Avantium Holding B.V. and Ares Capital Corporation signed an asset purchase agreement for the acquisition of Liquid Light assets. The purchase price amounts to US Dollar 1.5 million. The assets mainly relate to fixed assets and intellectual property.

On November 30 Synvina C.V. and Synvina B.V. were established. A direct effect of this establishment on the Group's result is that revenue and expenses related to the YXY Technology business can be charged to the joint venture effective as of 1 July 2016, following the joint venture agreement with BASF. As a result, per 30 November 2016 the Group is entitled to a reimbursement of Euro 3.8 million, in relation to operational expenses (Euro 1.8 million), CAPEX (Euro 1.6 million) and overhead expenses (Euro 0.4 million) for the period July – September 2016. At 30 November 2016, for the period July – November 2016, the cumulative reimbursement is estimated to be Euro 6 million.

The effects of the joint venture with BASF on the Group's consolidated statement of financial position and statement of comprehensive income, is estimated to be as follows:

- Recording of 'Investments accounted for using the equity method' of Euro 55 million.
- A transfer of property, plant and equipment and inventory to Synvina amounting to approximately Euro 8 million.
- Within the Group's consolidated statement of comprehensive income, a gain from transfer of assets amounting Euro 47 million.

7 Basis of preparation of Q3 report

The information is reported on quarter-three-to-date basis ending 30 September 2016. Where material to an understanding of the period starting 1 January 2016 and ending 30 September 2016, further information is disclosed. The interim financial statements were discussed and approved by the Executive Board. The interim financial statements should be read in conjunction with Avantium Holdings' consolidated financial statements in the 2015 annual report as approved on 11 May 2016. The interim financial statements have been prepared in accordance with IAS 34 'Interim financial reporting'. One standard, IFRS 13 – Fair Value Measurement, became applicable and was applied after issuance of the CLA, as disclosed in note 1 and 4. No new accounting policies have been adopted in 2016.

The significant accounting policies applied in these consolidated interim financial statements are consistent with those applied in Avantium Holdings' consolidated financial statements in the 2015 annual report for the year ended 31 December 2015, which have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and IFRS Interpretations Committee (IFRS IC) applicable to companies reporting under IFRS.

Avantium Holding B.V. ('the company') and its subsidiaries (together 'the Group') is a company limited by shares, incorporated and domiciled in The Netherlands. Its registered office and principal place of business is at Zekeringstraat 29-31, 1014 BV in Amsterdam.

The financial statements have been reviewed, not audited.

INDEPENDENT AUDITORS' REPORT ON REVIEW OF INTERIM CONSOLIDATED CONDENSED FINANCIAL INFORMATION

Review report

To: the Management Board of Avantium N.V.

Introduction

We have reviewed the accompanying condensed consolidated interim financial information for the nine-month period ended 30 September 2016 of Avantium Holding B.V., Amsterdam, which comprises the condensed consolidated statement of financial position as at 30 September 2016, the condensed consolidated statement of comprehensive income, the condensed consolidated statement of changes in equity, the condensed consolidated statement of cash flows for the period then ended and the selected explanatory notes. Executive board is responsible for the preparation and presentation of this (condensed) interim financial information in accordance with IAS 34, 'Interim Financial Reporting' as adopted by the European Union. Our responsibility is to express a conclusion on this interim financial information based on our review.

Scope

We conducted our review in accordance with Dutch law including standard 2410, Review of Interim Financial Information Performed by the Independent Auditor of the company. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with auditing standards and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the accompanying condensed consolidated interim financial information for the nine-month period ended 30 September 2016 is not prepared, in all material respects, in accordance with IAS 34, 'Interim Financial Reporting' as adopted by the European Union.

Corresponding figures not audited or reviewed

We have not audited the condensed consolidated interim financial information of the previous year nor have we performed a review engagement. Consequently, the corresponding figures included in the condensed consolidated statement of comprehensive income, the condensed consolidated statement of changes in equity, the condensed consolidated statement of cash flows and the selected explanatory notes, have not been audited or reviewed.

Amsterdam, 22 December 2016

PricewaterhouseCoopers Accountants N.V.

Original has been signed by J. van Meijel RA

CONSOLIDATED FINANCIAL INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2015

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

in Euro x 1,000	Notes	Year ended 31 December 2015	Year ended 31 December 2014
Continuing operations			
Revenues	18	10,266	9,628
Other income		-	-
Expenses			
Direct selling expenses	19	(1,767)	(2,276)
Employee benefit expenses	20	(6,841)	(6,108)
Depreciation, amortization and impariment	19	(621)	(569)
Office and housing expenses	19	(1,846)	(1,356)
Patent, license, legal and advisory expenses	19	(1,002)	(1,009)
Laboratory expenses	19	(1,009)	(1,197)
Marketing and representation expenses	19	(559)	(827)
Other operating expenses	19	(94)	(411)
Operating loss		**(3,473)**	**(4,126)**
Finance income	21	124	268
Finance costs	21	(1)	(598)
Finance costs - net		**123**	**(330)**
Loss before income tax		**(3,350)**	**(4,456)**
Income tax expense	22	-	-
Loss for the year from continuing operations		**(3,350)**	**(4,456)**
Loss for the year from discontinued operati	10	**(9,828)**	**(9,899)**
Loss for the period		**(13,178)**	**(14,356)**
Total comprehensive income for the year		**(13,178)**	**(14,356)**
Loss attributable to:			
Owners of the parent		(13,178)	(14,798)
Non-controlling interests		-	442
		(13,178)	**(14,356)**
Total comprehensive income attributable to:			
Owners of the parent		(13,178)	(14,798)
Non-controlling interests		-	442
		(13,178)	**(14,356)**

Earnings per share for profit from continuing operations attributable to the ordinary equity holders of the company	**note**	**2015 (euro)**	**2014 (euro)**
Basic earnings per share	13	(0.03)	(0.03)
Diluted earnings per share	13	(0.02)	(0.03)
Earnings per share for profit attributable to the ordinary equity holders of the company			
Basic earnings per share	13	(0.10)	(0.11)
Diluted earnings per share	13	(0.09)	(0.10)

The notes on pages [•] 14-51 are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

in Euro x 1,000		**As at 31 December**	
	Notes	**2015**	**2014**
Assets			
Non-current assets			
Property, plant and equipment	5	4,017	9,180
Intangible assets	6	359	228
Total non-current assets		4,376	9,408
Current assets			
Inventories	7	1,045	896
Trade and other receivables	8	5,086	5,505
Cash and cash equivalents (excluding bank	9	6,981	19,140
Total current assets		13,112	25,541
Assets held for sale	10	5,424	419
Total assets		**22,913**	**35,369**
Liabilities			
Non-current liabilities			
Borrowings	15	3,600	3,865
Provisions for other liabilities and charges	16	-	266
		3,600	**4,132**
Current liabilities			
Borrowings	15	400	2,033
Trade and other payables	14	6,196	7,472
Provisions for other liabilities and charges	16	168	264
		6,764	**9,769**
Liabilities related to assets held for sale	10	3,190	(62)
Total liabilities		**13,555**	**13,838**
Equity			
Equity attributable to owners of the parent			
Ordinary shares	11	1,319	1,319
Share premium	11, 12	81,272	81,272
Other reserves	11, 12	5,266	5,207
Retained earnings		(78,499)	(66,784)
Total equity attributable to the owners of the		9,358	21,014
Non-controlling interest		-	517
Total equity		**9,358**	**21,531**
Total equity and liabilities		**22,913**	**35,369**

The notes on pages [•] 14-51 are an integral part of these consolidated financial statements.

The financial statements on pages [•] 14-51 are authorized for issue by the Executive Board on 11 May 2016.

T.B. van Aken
Chief Executive Officer

F.C.H. Roerink
Chief Financial Officer

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

in Euro x 1,000		Attributable to equity holders of the company						
	Notes	**Ordinary shares**	**Share premium**	**Other reserves**	**Retained earnings**	**Total**	**Non-controlling interest**	**Total equity**
Balance at 1 January 2013		**927**	**43,491**	**3,080**	**(40,934)**	**6,564**	**148**	**6,712**
Comprehensive income								
Result for the year		-	-	-	(11,053)	(11,053)	(73)	(11,125)
Other Comprehensive income for the year								
Total Comprehensive income for the year		-	-	**-**	**(11,053)**	**(11,053)**	**(73)**	**(11,125)**
Transactions with owners								
- Employee share schemes – value of Employee services	12	-	-	1,192	-	1,192	-	1,192
- Issue of ordinary shares	11	-	-	-	-	-	-	-
Total transactions with owners		**-**	**-**	**1,192**	**-**	**1,192**	**-**	**1,192**
Balance at 31 December 2013		**927**	**43,491**	**4,272**	**(51,986)**	**(3,296)**	**75**	**(3,221)**
Balance at 1 January 2014		927	43,491	4,272	(51,986)	(3,296)	75	(3,221)
Comprehensive income								
Result for the year		-	-	-	(14,798)	(14,798)	442	(14,356)
Other Comprehensive income for the year		-	-	-	-	-	-	-
Total Comprehensive income for the year		**-**	**-**	**-**	**(14,798)**	**(14,798)**	**442**	**(14,356)**
Transactions with owners								
- Employee share schemes – value of Employee services	12	-	-	935	-	935	-	935
- Issue of ordinary shares	11	392	37,781	-	-	38,173	-	38,173
Total transactions with owners		**392**	**37,781**	**935**	**-**	**39,108**	**-**	**39,108**
Balance at 31 December 2014		**1,319**	**81,272**	**5,207**	**(66,784)**	**21,014**	**517**	**21,531**
Balance at 1 January 2015		**1,319**	**81,272**	**5,207**	**(66,784)**	**21,014**	**517**	**21,531**
Comprehensive income								
Result for the year		-	-	-	(13,178)	(13,178)	-	(13,178)
Other Comprehensive income for the year						-		-
Total Comprehensive income for the year		-	-	**-**	**(13,178)**	**(13,178)**	**-**	**(13,178)**
Transactions with owners								
- Employee share schemes – value of Employee services	12	-	-	1,005	-	1,005	-	
- Transfer value share scheme to retained earnings	12	-	-	(946)	946	-	-	-
- Issue of ordinary shares	11	-	-	-	-	-	-	-
- Transactions with non-controlling interests	11	-	-	-	517	517	(517)	-
Total transactions with owners		**-**	**-**	**59**	**1,463**	**1,522**	**(517)**	**1,005**
Balance at 31 December 2015		**1,319**	**81,272**	**5,266**	**(78,499)**	**9,358**	**0**	**9,358**

The notes on pages [•] 14-51 are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

in Euro x 1,000

	Notes	Year ended 31 December 2015	2014
Cash flows from continuing operations			
Cash flows from operating activities			
Loss for the year from continuing operations		(3,350)	(4,456)
Adjustments for:			
- Depreciation	5, 10	568	500
- Amortization	6, 10	53	69
- Impairment	6	-	-
- Share-based payment	12	1,005	935
- Finance costs - net	21	(123)	330
Changes in working capital (excluding exchange differences on consolidation):			
- (Increase) in inventories	7	(255)	136
- (Increase) in trade and other receivables	8	(465)	(828)
- Increase in trade and other payables	14	590	(1,975)
- Increase in provisions	10, 16	(362)	97
		(2,337)	(5,191)
Interest (paid)	21	(60)	(159)
Net cash used in operating activities		(2,397)	(5,350)
Cash flows from investing activities			
Purchases of property, plant and equipment (PPE)	5	(2,126)	(1,635)
Purchases of intangible assets	6	(191)	(185)
Net cash used in investing activities		(2,317)	(1,820)
Cash flow from financing activities			
Proceeds from issuance of ordinary shares	11	-	27,035
Interest received	21	124	268
Innovation loan	15	224	-
Convertible bond	15	-	-
Repayments of borrowings	15	(5)	(5)
Net cash generated from financing activities		343	27,298
Cash flows from discontinued operations			
Net cash from/ (used in) operating activities	10	(3,847)	(6,461)
Net cash from/ (used in) investing activities	10	-	-
Net cash from/ (used in) financing activities	10	(4,000)	21
Change in cash from discontinued operations		**(7,847)**	**(6,440)**
Net increase / (decrease) in cash, cash equivalents		**(4,371)**	**20,128**
Cash, cash equivalents and bank overdrafts at	9	19,140	5,425
Effect of exchange rate changes	21	59	26
Cash, cash equivalents and bank overdrafts from continuing operations at end of financial year		**14,828**	**25,580**
Cash, cash equivalents and bank overdrafts at end of financial year		**6,981**	**19,140**

The notes on pages [•] 14-51 are an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1 General information

Avantium Holding B.V. ('the company') and its subsidiaries (together 'the group') develop and commercialize next generation bio-based plastics and chemicals based on our unique technological capabilities in advanced catalysis research & development. Over the years our company has established a leading market position in providing advanced catalysis services and systems. The company has its statutory seat at the Zekeringstraat 29-31, 1014 BV in Amsterdam, The Netherlands.

These consolidated financial statements are approved for issue by both the Supervisory Board and the Executive Board on 11 May 2015.

2 Summary of significant accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

2.1 Basis of preparation

The consolidated financial statements of Avantium Holding B.V. have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and IFRS Interpretations Committee (IFRS IC) applicable to companies reporting under IFRS. The consolidated financial statements have been prepared under the historical cost convention.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in note 4.

2.1.1 Going concern

The net loss for the year 2015 amounts to Euro 13,178,000, and in anticipation of the Annual Meeting's adoption of the annual accounts, this has been added to the accumulated deficit resulting in a net equity of Euro 9.4 million. As per the 18th of December 2015, the company (Avantium Holding B.V.) signed a memorandum of understanding with BASF SE, regarding the formation of a joint venture (JV) for the commercialization of Furan-Di-Carboxylic-Acid (FDCA), Poly-Ethylene-Furanoate (PEF) and the related technologies (YXY technology). Within Avantium Holdings the entities involved in the transaction are YXY Technologies B.V. (of which primarily the machines and equipment will be transferred) and Furanix Technologies B.V. (in which the YXY IP is filed and will be transferred to the joint venture). BASF SE will hold a 51% share of the JV, where Avantium will hold the remaining 49%. BASF SE will fully consolidate the JV in accordance with IFRS 10. The company did not make use of the credit facility of Euro 2.0 million with ABN AMRO Bank and will keep the facility as an additional buffer. The company complies at year end with the solvability ratio as agreed with ABN AMRO Bank. Refer to note 3.2 p. [•] for the group's objective in terms of capital management.

Also for 2016 the group anticipates on a net loss including negative operating cash flows, but as a result of the funding activities anticipated and strict working capital management the group has maintained its short-term and medium-term liquidity position. We believe that the anticipated cash flows of our services and systems business and new funding of € 20 million finalized in March 2016, as outlined in note 28 p. [•], are sufficient to meet the requirements for working capital, capital expenditures and R&D for at least the next twelve months from the date of this report. The group therefore continues to adopt the going concern basis in preparing its consolidated financial statements.

2.1.2 Changes in accounting policy and disclosures

(a) New standards, amendments and interpretations adopted by the group

The following standards have been adopted by the group for the first time for the financial year beginning on or after 1 January 2015. The impact on the group is as follows:

- IFRS 8 Operating segments. The group has opted to incorporate IFRS 8 into the annual statements for the first time in 2015, allowing stakeholders to gain further valuable segment information from the companies' lines of business. The company therefore reflects segment reporting in the financial statements of the year ending 31 December 2015, and onwards. The introduction of IFRS 8 did not have an effect on the group financial statements.
- IAS 33 Earnings per Share. Similar to IFRS 8, the group has decided to incorporate IAS 33 into the annual statements to provide our stakeholders with insight in the determination of earnings per share and improve performance comparisons.
- Amendment to IFRS 2, 'Share-based Payment' on vesting conditions. This amendment clarifies the definition of 'vesting condition' and now distinguishes between 'performance condition' and 'service condition'. The amendment did not have a significant effect on the group financial statements.

Other standards, amendments and interpretations which are effective for the financial year beginning on 1 January 2015 are not material to the group.

(b) New standards, amendments and interpretations not yet adopted

A number of new standards and amendments to standards and interpretations are effective for annual periods beginning after 1 January 2015, and have not been applied in preparing the consolidated financial statements. None of these is expected to have a significant effect on the consolidated financial statements of the Group, except the following set out below:

- IFRS 9, 'Financial instruments', a forthcoming standard, addresses the classification, measurement and recognition of financial assets and financial liabilities. The complete version of IFRS 9 was issued in July 2014. It replaces the guidance in IAS 39 that relates to the classification and measurement of financial instruments. IFRS 9 retains but simplifies the mixed measurement model and establishes three primary measurement categories for financial assets: amortized cost, fair value through OCI and fair value through P&L. The basis of classification depends on the entity's business model and the contractual cash flow characteristics of the financial asset. Investments in equity instruments are required to be measured at fair value through profit or loss with the irrevocable option at inception to present changes in fair value in OCI not recycling. There is now a new expected credit losses model that replaces the incurred loss impairment model used in IAS 39. For financial liabilities there were no changes to classification and measurement except for the recognition of changes in own credit risk in other comprehensive income, for liabilities designated at fair value through profit or loss. IFRS 9 relaxes the requirements for hedge effectiveness by replacing the bright line hedge effectiveness tests. It requires an economic relationship between the hedged item and hedging instrument and for the 'hedged ratio' to be the same as the one management actually use for risk management purposes. Contemporaneous documentation is still required but is different to that currently prepared under IAS 39. The standard is effective for accounting periods beginning on or after 1 January 2018. Early adoption is permitted. The group is yet to assess IFRS 9's full impact.

- The amendment to IFRS 13 for financial instruments that are measured in the balance sheet at fair value is yet to be adopted. This requires disclosure of fair value measurements by level of the following fair value measurement hierarchy:

  - Quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1).
  - Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (level 2).
  - Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (level 3).

  The group does not hold any financial instruments traded in active markets. For the finance lease liabilities we refer to note 14 p. [•].

- IFRS 15, 'Revenue from contracts with customers' deals with revenue recognition and establishes principles for reporting useful information to users of financial statements about the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity's contracts with customers. Revenue is recognized when a customer obtains control of a good or service and thus has the ability to direct the use and obtain the benefits from the good or service. The standard replaces IAS 18 'Revenue' and IAS 11 'Construction contracts' and related interpretations. The standard is effective for annual periods beginning on or after 1 January 2018 and earlier application is permitted. The group is yet to assess the impact of IFRS 15, which is furthermore yet to be adopted by the European Union.

There are no other IFRS or IFRIC interpretations that are not yet effective that would be expected to have a material impact on the Group.

2.2 Consolidation

(a) Subsidiaries

Subsidiaries are all entities over which the group has control. The group controls an entity when the group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the group. They are deconsolidated from the date that control ceases.

The group applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The group recognizes any non-controlling interest in the acquiree on an acquisition- by-acquisition basis, either at fair value or at the non-controlling interest's proportionate share of the recognized amounts of acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measurement are recognized in profit or loss. Any contingent consideration to be transferred by the group is recognized at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognized in accordance with IAS 39 either in profit or loss or as a change to other comprehensive income.

Contingent consideration that is classified as equity is not re-measured, and its subsequent settlement is accounted for within equity.

The consolidated companies are listed below:

- Avantium Technologies B.V., Amsterdam (100%);
- Avantium Support B.V., Amsterdam (100%);
- Avantium Cleantech B.V., Amsterdam (100%);
- Avantium Chemicals B.V., Amsterdam (100%);
- Avantium Knowledge Centre B.V., Amsterdam (100%);
- Furanix Technologies B.V., Amsterdam (100%);
- YXY Technologies B.V., Amsterdam (100%);
- Stichting Administratiekantoor Avantium, Amsterdam (100%);
- Stichting Stock Options Avantium, Amsterdam (100%);
- Feedstock Technologies B.V., Amsterdam (100%).

On 8 January 2015 Zwarte Zwaan Holding B.V. ceased to have control over Avantium Pharmatech B.V. as 100% of the shares of Avantium Pharmatech B.V. were sold to the Technobis Group B.V. with effective date 31 December 2014. Subsequently, the group dissolved Zwarte Zwaan Holding B.V. on 11 December 2015. We therefore present the results of Avantium Pharmatech B.V. and Zwarte Zwaan Holding B.V. as "discontinued operations" and the balance sheet items of Avantium Pharmatech B.V. as "assets held for sale".

As per the 18th of December 2015, the company signed a memorandum of understanding with BASF SE, regarding the formation of a joint venture (JV) for the commercialization of Furan-Di-Carboxylic-Acid (FDCA), Poly-Ethylene-Furanoate (PEF) and the related technologies (YXY technology). The JV will engage in (i) the manufacturing and marketing of FDCA, (ii) marketing of PEF manufactured under toll-manufacturing arrangements, (iii) the licensing of FDCA and PEF production and application IP, as well as (iv) the research and development. Within Avantium Holding the entities involved in the transaction are YXY Technologies B.V. (of which primarily the machines and equipment will be transferred) and Furanix Technologies B.V. (in which the YXY IP is filed and will be transferred to the joint venture). The JV will engage in the manufacturing and marketing of FDCA, marketing of PEF manufactured under toll-manufacturing arrangements, the licensing of FDCA and PEF production and application IP. BASF SE will hold a 51% share of the JV, where Avantium will hold the remaining 49%.

In accordance with IFRS 5.31 and 5.32, the component for sale (YXY Technologies), comprises operations and cash flows that can be clearly distinguished from the rest of the entity. Furthermore it can be concluded that the YXY business represents a separate major line of business as one of the three main pillars of Avantium, and therefore classifying as a discontinued operation. By the agreement of the MoU prior to year-end 2015, and as a result meeting the criteria of IFRS 5.8, the sale becomes highly probable. Therefore the YXY business is reported as assets held for sale in the financial statements of 2015.

Inter-company transactions, balances and unrealized gains on transactions between group companies are eliminated. Unrealized losses are also eliminated. When necessary amounts reported by subsidiaries have been adjusted to conform with the group's accounting policies.

(b) Changes in ownership interests in subsidiaries without change of control

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the owners in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

(c) Disposal of subsidiaries

When the group ceases to have control any retained interest in the entity is re-measured to its fair value at the date when control is lost, with the change in carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity are accounted for as if the group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in other comprehensive income are reclassified to profit or loss.

(d) Principles of consolidation and equity accounting

When the group ceases to consolidate or equity account for an investment because of a loss of control, joint control or significant influence, any retained interest in the entity is remeasured to its fair value with the change in carrying amount recognised in profit or loss. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognised in other comprehensive income are reclassified to profit or loss.

If the ownership interest in a joint venture or an associate is reduced but joint control or significant influence is retained, only a proportionate share of the amounts previously recognised in other comprehensive income are reclassified to profit or loss where appropriate.

(e) Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision maker. The Executive Board has appointed the Management Team which assesses the financial performance and position of the group, and makes strategic decisions. The Management Team, which has been identified as being the chief operating decision maker, consists of the chief executive officer, the chief financial officer, the chief technology officer, chief operating officer, chief commercial officer, and the managing director of Catalysis.

2.3 Foreign currency translation

(a) Functional and presentation currency

Items included in the financial statements of each of the group's entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in Euros, which is the company's presentation currency.

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuations where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the statement of comprehensive income.

Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents are presented in the statement of comprehensive income within 'finance income or cost'.

(c) Group companies

The results and financial position of all the group entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;
- Income and expenses for each statement of comprehensive income are translated at the average exchange rates; and
- All resulting exchange differences are recognized as a separate component of other comprehensive income.

2.4 Use of estimates

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. For us, the use of estimates is or could be a significant factor affecting the reported carrying values of property, plant and equipment, intangibles, trade and other receivables and trade and other payables. Despite management's best efforts to accurately estimate such amounts, actual results could materially differ from those estimates.

2.5 Property, plant and equipment

Property, plant and equipment comprise mainly the pilot plant, laboratory equipment, hardware and leasehold improvements. All property, plant and equipment is stated at historical cost less accumulated depreciation. Historical cost includes expenditures that are directly attributable to the acquisition of the items. Leasehold improvements include capitalization of the estimated costs associated with removing and restoring the leased buildings into its original condition.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the group and the cost of the item can be measured reliably. All other repairs and maintenance charges are expensed in the financial period in which they are incurred.

Depreciation is calculated using the straight-line method to allocate their cost of the assets to their residual values over their estimated useful lives as follows:

- Leasehold improvements	5-20 years
- Machinery, laboratory equipment and vehicles	5 years
- Computer hardware	3 years
- Office furniture and equipment	3-5 years

The pilot plant is classified as 'Machinery' and will be depreciated in 5 years. New parts of the pilot plant which are classified as 'Construction in progress' will only be depreciated after finalization. The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount (also refer to note 2.6 p. [•]).

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount. Gains and losses are included in the consolidated statement of comprehensive income.

2.6 Intangible assets

(a) Research and development

Research expenditures are recognized as expenses as incurred. Development costs that are directly attributable to the design and testing of identifiable and unique products controlled by the group are recognized as intangible assets when the following criteria are fulfilled:

- It is technically feasible to complete the intangible asset so that it will be available for use or sale;
- Management intends to complete the intangible asset and use or sell it;
- There is an ability to use or sell the intangible asset;
- It can be demonstrated how the intangible asset will generate probable future economic benefits;
- Adequate technical, financial and other resources to complete the development and to use or sell the intangible asset are available; and
- The expenditure attributable to the intangible asset during its development can be reliably measured.

Current revenues are generated from the product Flowrence™ for which development expenses have been capitalized. The expenditures capitalized include the cost of materials, direct labor and an appropriate proportion of overheads. The majority of the group's operations classify as research and development as defined under IAS 38, which is also confirmed by the received government grants. Also refer to note 20 p. [•].

Other development expenditures that do not meet these criteria are recognized as an expense as incurred. Development costs previously recognized as an expense are not recognized as an asset in a subsequent period. Capitalized development costs are recorded as intangible assets and amortized from the point at which the asset is ready for use on a straight-line basis over its estimated useful life of 5 years. Intangible assets not ready for use are tested for impairment at least on an annual basis.

Amortization of development costs is included in cost of sales in the statement of comprehensive income. All development costs arose from internal development.

(b) Computer software

Acquired computer software licenses are capitalized on the basis of the costs incurred to acquire and use the specific software. These costs are amortized over their estimated useful lives of 3 years.

Costs associated with developing or maintaining computer software programs are recognized as expenses as incurred. Development costs that are directly attributable to the design and testing of identifiable and unique software products controlled by the group, that will probably generate economic benefits exceeding costs beyond one year, are recognized as intangible assets.

2.7 Impairment of non-financial assets

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets other than goodwill that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

2.8 Non-current assets (or disposal groups) held for sale

Non-current assets (or disposal groups) are classified as assets held for sale when their carrying amount is to be recovered principally through a sale transaction and a sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell.

2.9 Financial assets

2.9.1 Classification

The group classifies its financial assets in the loans and receivables category. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of its financial assets at initial recognition.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for maturities greater than 12 months after the balance sheet date. These are classified as non-current assets. The group's loans and receivables comprise 'trade and other receivables' and 'cash and cash equivalents' in the balance sheet.

2.9.2 Recognition and measurement

Regular purchases and sales of financial assets are recognized on the trade-date, the date on which the group commits to purchase or sell the asset. Loans and receivables are subsequently carried at amortized cost using the effective interest method.

2.10 Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the company or the counterparty.

2.11 Impairment of financial assets

(a) Assets carried at amortized cost

The group assesses at the end of each reporting year whether there is objective evidence that a financial asset or group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganization, and where observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

For loans and receivables category, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced and the amount of the loss is recognized in the consolidated statement of comprehensive income. If a loan or held-to-maturity investment has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate determined under the contract. As a practical expedient, the group may measure impairment on the basis of an instrument's fair value using an observable market price.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized (such as an improvement in the debtor's credit rating), the reversal of the previously recognized impairment loss is recognized in the consolidated statement of comprehensive income.

(b) Assets classified as available for sale

The group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired.

2.12 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the first-in, first-out (FIFO) method. The cost of raw materials, finished goods and work in progress comprises all purchase costs including charges incurred to bring inventories to their current location and into their current state. It excludes borrowing costs. Net realizable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

2.13 Trade receivables

Trade receivables are amounts due from customers for products sold or services performed in the ordinary course of business. If collection is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade receivables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method, less provision for impairment.

2.14 Cash and cash equivalents

In the consolidated statement of cash flows, cash and cash equivalents includes cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less and bank overdrafts. In the consolidated statement of financial position, bank overdrafts are shown within borrowings in current liabilities.

2.15 Share capital

Ordinary shares

Ordinary shares are classified as equity. Mandatorily redeemable preference shares are classified as liabilities. Incremental costs directly attributable to the issue of new ordinary shares or options are shown in equity as a deduction, net of tax, from the proceeds.

Treasury shares

Where any group company purchases the company's equity share capital (treasury shares), the consideration paid, including any directly attributable incremental costs (net of income taxes) is deducted from equity attributable to the company's equity holders until the shares are cancelled or reissued. Where such ordinary shares are subsequently reissued, any consideration received, net of any directly attributable incremental transaction costs and the related income tax effects, is included in equity attributable to the company's equity holders.

2.16 Trade payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

Trade payables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method.

2.17 Borrowings

Borrowings are recognized initially at fair value, net of transaction costs incurred. Borrowings are subsequently stated at amortized cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the statement of comprehensive income over the period of the borrowings using the effective interest method.

Fees paid on the establishment of loan facilities are recognized as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalized as a pre-payment for liquidity services and amortized over the period of the facility to which it relates.

Borrowings are removed from the balance sheet when the obligation specified in the contract is discharged, cancelled or expired. The difference between the carrying amount of a financial liability that has been extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognised in profit or loss as other income or finance costs.

Borrowings are classified as current liabilities unless the group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting period.

2.18 Current and deferred income tax

The tax expense for the year comprises current and deferred tax. Tax is recognized in the statement of comprehensive income, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case the tax is also recognized in other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the company's subsidiaries and associates operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognized, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred income tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax assets and liabilities relate to income taxes levied by the same taxation authority on either the taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

2.19 Employee benefits

(a) Pension obligations

The group operates a defined contribution pension plan for all employees funded through payments to an insurance company. The group has no legal or constructive obligations to pay further contributions if the plan does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior years. The contributions are recognized as employee benefit expense when they are due. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

(b) Share-based payments

The group operates a share-based compensation plan for its employees, also refer to note 12 p. [•]. This plan is classified as an equity-settled share option plan which was adopted in 2006 ("Avantium Option Plan").

Share options granted to employees are measured at the fair value of the equity instruments granted, or indirect method of measurement. Fair value is determined through the use of an option-pricing model considering, amongst others, the following variables:

a) The exercise price of the option;
b) The expected life of the option;
c) The current value of the underlying shares;
d) The expected volatility of the share price, calculated considering the effect of dividends on stock price;
e) The dividends expected on the shares; and
f) The risk-free interest rate for the life of the option.

For the company's share option plan, management's judgment is that the Binomial option valuation model is most appropriate for determining fair values as this model allows accounting for non-transferability, vesting conditions and early exercise. Until the listing of our shares, management needs to estimate the fair value of our shares and the expected volatility of that value. These assumptions and estimates are further discussed in note 12 p. [•] to the IFRS consolidated financial statements. The result of the share option valuations and the related compensation expense is dependent on the model and input parameters used. Even though management considers the fair values reasonable and defensible based on the methodologies applied and the information available, others might derive at a different fair value for each of the company's share option plan.

The costs of the employee share-based payment plan are measured by reference to the fair value of the options at the date at which the options are granted using a Binomial option valuation model. For the equity-settled Avantium Option Plan, the fair value is determined at the grant date.

The fair value of the employee services received in exchange for the grant of the options is recognized as an expense. For share-based payments that do not vest until the employees have completed a specified period of service, the group recognizes the services received as the employees render service during that period. The company treats each installment of a graded vesting award as a separate share option grant.

At each balance sheet date, the company revises its estimates of the number of options that are expected to become exercisable. It recognizes the impact of the revision of original estimates, if any, in the statement of comprehensive income and for the equity settled plan a corresponding adjustment to equity.

The proceeds received from exercised options net of any directly attributable transaction costs are credited to share capital (nominal value) and share premium.

(c) Profit-sharing and bonus plans

The group recognizes a liability and an expense for bonuses and profit-sharing where contractually obliged or where there is a past practice that has created a constructive obligation.

2.20 Provisions

Provisions are recognized when the group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount can be reliably estimated.

The group provides for the estimated cost of product warranties and product returns at the time revenue is recognized and the group has a constructive obligation. Warranty provision is established based on the group's best estimates of the amounts necessary to settle future and existing claims on products sold as of the balance sheet date. Product return provisions are based on our historical experiences.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation.

2.21 Revenue recognition

Revenue comprises the fair value of the consideration received or receivable for the sale of goods and services in the ordinary course of the group's activities. Revenue is shown net of value-added tax, returns, rebates and discounts and after eliminating sales within the group.

The group recognizes revenue when the amount of revenue can be reliably measured, it is probable that future economic benefits will flow to the entity and specific criteria have been met for each of the group's activities as described below. The group bases its estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

(a) Sales of goods

Revenue is generated by discontinued operations in the form of material transfer agreements in YXY from the supply of goods (FDCA and PEF) and recognized as soon as all substantial rights and risks relating to the title to the goods are transferred to the customer.

(b) Construction contracts

A construction contract is defined by IAS 11, 'Construction contracts', as a contract specifically negotiated for the construction of an asset.

Construction contract revenue and expense related to Flowrence™ systems are accounted for using the percentage-of-completion method, which recognizes revenue as performance of the contract progresses. The stage of completion is measured by reference to the contract costs incurred up to the end of the reporting period as a percentage of total estimated costs for each contract. Costs incurred in the year in connection with future activity on a contract are excluded from contract costs in determining the stage of completion.

On the balance sheet, the group reports the net contract position for each contract as either an asset or a liability. A contract represents an asset where costs incurred plus recognized profits (less recognized losses) exceed progress billings; a contract represents a liability where the opposite is the case.

Variations in contract work, claims and incentive payments are included in contract revenue to the extent that may have been agreed with the customer and are capable of being reliably measured.

Where the income of a construction contract cannot be estimated reliably, contract revenue that is probable to be recovered is recognized to the extent of contract costs incurred. Contract costs are recognized as expenses in the period in which they are incurred.

(c) Multiple element arrangements

In certain circumstances, it is necessary to apply the recognition criteria to the separately identifiable components of a single transaction in order to reflect the substance of the transaction. Conversely, the recognition criteria are applied to two or more transactions together when they are linked in such a way that the commercial effect cannot be understood without reference to the series of transactions as a whole.

The group offers arrangements whereby a customer purchases systems and installations services under one arrangement. When such multiple element arrangements exist, an element is accounted for as a separable element if it has value to the customer on a standalone basis and the fair value can be determined objectively and reliably.

When Chemical Systems revenues and installation service revenues are identified as separable elements in a multiple element transaction, the Systems revenue recognized is determined based on the fair value of the Systems in relation to the fair value of the arrangement taken as a whole and is recognized as discussed above. The revenue relating to the installation service element, which represents the fair value of the installation services in relation to the fair value of the arrangement, is recognized upon completion of the installation services.

This separation is justified due to the fact that the supply and installation of the goods are offered to the customer separately as the installation can also be executed by an independent third party.

Timing of payment by the customer from the supply of goods is based on the contractual identified installments. This could result, on a product by product basis, in advanced payments. These amounts are reported on the balance sheet under other current liabilities.

(d) Sales of services

Revenue from the sale of services is recognized under the percentage-of-completion ("POC") method. Under the POC method, revenue is generally recognized based on the services performed to date as a percentage of the total services to be performed.

Timing of payment by the customer from sale of services is based on the contractual identified technical milestones. This could result, on a project by project basis, in unbilled revenues or advanced payments. These amounts are reported on the balance sheet under other receivables or other current liabilities.

As part of discontinued operations, for joint development agreements to further develop, test and prove the YXY technology, management identified milestones and PEF deliveries as included in the agreements as basis to determine revenue recognition in accordance with the POC method.

If circumstances arise that may change the original estimates of revenues, costs or extent of progress toward completion, estimates are revised. These revisions may result in increases or decreases in estimated revenues or costs and are reflected in income in the period in which the circumstances that give rise to the revision become known by management.

2.22 Government grants

Grants from the government are recognized at their fair value where there is a reasonable assurance that the grant will be received and the group will comply with all attached conditions.

Government grants relating to costs are deferred and recognized in the income statement over the period necessary to match them with the costs that they are intended to compensate.

Government grants relating to property, plant and equipment are included in non-current liabilities as deferred government grants and are credited to the income statement on a straight-line basis over the expected lives of the related assets.

2.23 Interest Income

Interest income is recognized using the effective interest method. When a loan and receivable is impaired, the group reduces the carrying amount to its recoverable amount, being the estimated future cash flow discounted at the original effective interest rate of the instrument, and continues unwinding the discount as interest income. Interest income on impaired loan and receivables is recognized using the original effective interest rate.

2.24 Leases

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the statement of comprehensive income on a straight-line basis over the period of the lease.

The group leases certain property, plant and equipment. Leases of property, plant and equipment where the group has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalized at the lease's commencement at the lower of the fair value of the leased property and the present value of the minimum lease payments.

Each lease payment is allocated between the liability and finance charges. The corresponding rental obligations, net of finance charges, are included in other long-term payables. The interest element of the finance cost is charged to the income statement over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant and equipment acquired under finance leases is depreciated over the shorter of the useful life of the asset and the lease term. Only operating leases are applicable.

2.25 Earnings per Share

(a) Basic earnings per share

Basic earnings per share is calculated by dividing:

- the profit attributable to owners of the company, excluding any costs of servicing equity other than ordinary shares
- by the weighted average number of ordinary shares outstanding during the financial year, adjusted for bonus elements in ordinary shares issued during the year and excluding treasury shares (note 9(b) p. [•]).

(b) Diluted earnings per share

Diluted earnings per share adjusts the figures used in the determination of basic earnings per share to take into account:

- the after income tax effect of interest and other financing costs associated with dilutive potential ordinary shares, and
- the weighted average number of additional ordinary shares that would have been outstanding assuming the conversion of all dilutive potential ordinary shares.

3 Financial risk management

3.1 Financial risk factors

The group's activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. The group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the group's financial performance.

Risk management is carried out by the central Finance & Accounting department ("Group F&A") under policies approved by the Executive Board. Group F&A identifies, evaluates and covers financial risks in close co-operation with the group's operating units. The board provides principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of non-derivative financial instruments, and investment of excess liquidity.

Financial instrument by category

Loans and receivables:

in Euro x 1,000	Notes	As at 31 December 2015	2014
Trade receivables	8	2,595	5,006
Other receivables	8	629	430
Cash and cash equivalents	9	6,981	19,140

Financial liabilities:

in Euro x 1,000	Notes	2015	2014
Trade payables	14	1,555	2,292
Finance lease liabilities	15	-	5
Other liabilities	14	4,067	4,357

Also refer to note 14 p. [•] and 15 p. [•] for an overview of Trade and other payables and Borrowings.

(a) Currency risk

The group operates internationally and is exposed to foreign exchange risk primarily with respect to the US dollar. Foreign exchange risk arises from future commercial transactions, recognized assets and liabilities. Management has set up a policy that requires group companies to manage their foreign exchange risk against their functional currency. The group companies are required to close commercial transactions in Euros. Certain US based customers negotiate US dollar contracts. The numbers of those contracts are very limited and the group companies can close such contract only after written approval of management, and therefore the group's operations are not subject to significant foreign exchange rate risks. Foreign exchange risk arises when future commercial transactions or recognized assets and liabilities are denominated in a currency that is not the entity's functional currency.

The group had outstanding trade receivables in US dollars 266,000 (2014: US dollars 343,000) and in US dollars 14,000 (2014: US dollars 219,000, of which US dollar 17,000 was YXY related) outstanding trade payables. The group had no trade receivables or trade payables in other foreign currencies.

At 31 December 2015, if the currency had weakened by 10% against the US dollar with all other variables held constant, post-tax result for the year would have been Euro 13,000 higher (2014: Euro 53,000 higher) as the cash position included US dollar 135,000. The group had no cash position in other foreign currencies.

(b) Credit risk

Credit risk is managed on group basis. The group does not have any significant concentrations of credit risk and is limited to outstanding trade receivables and cash and cash equivalents. On 31 December 2015, the largest single client exposure consisted of 36% of the outstanding trade receivables. The group clients are subject to creditworthiness tests. Sales are subject to payment conditions varying between payments in advance and 30 days after invoice date. For certain projects, deviations to this rule may apply only after approval of group F&A, in which case additional security, including guarantees and documentary credits, may be required. Management does not expect any losses from non-performance by its clients.

In 2015 nil Euro (2014: nil Euro) was written off and Euro 1,095,000 was past due, of which 51% had been paid before the date of this report and the remaining 49% is for one credit worthy customer, and payment outstanding per agreed terms.

in Euro x 1,000	As at 31 December 2015	2014
Up to 3 months past	1,085	731
3 - 6 months past due	10	160
	1,095	**891**

The maximum exposure to credit risk at the reporting date is the carrying value of each class of receivable mentioned above. The group does not hold any collateral as security. Group funds are held at ABN AMRO bank, with a long term credit rating of between A and A+.

(c) Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed credit facilities and the ability to close out market positions.

At the end of 2015, the group has a banking facility with the ABN AMRO Bank of Euro 2.0 million, which has not been utilized. All assets, excluding the intangible assets and the finance lease assets are pledged to the ABN AMRO Bank. Management monitors monthly rolling forecasts of the group's cash and cash equivalents (note 9 p. [•]) on the basis of actual results and expected cash flow.

The table below analyses the group's financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet to the contractual maturity. The amounts disclosed in the table are the contractual undiscounted cash flows for continuing operations. The specific time buckets are not mandated by the standard but are based on a choice of management.

At 31 December 2015:

in Euro x 1,000	**Less than 1 year**	**Between 1 and 2 years**	**Between 2 and 5 year**	**Over 5 years**	**Total**
Borrowings	400	800	2,800	-	4,000
Trade payables	1,555	-	-	-	1,555
Other current liabilities	4,067	-	-	-	4,067
	6,021	**800**	**2,800**	**0**	**9,621**

At 31 December 2014:

in Euro x 1,000	**Less than 1 year**	**Between 1 and 2 years**	**Between 2 and 5 year**	**Over 5 years**	**Total**
Borrowings	2,028	755	2,644	466	5,893
Finance lease liabilities	5	0	-	-	5
Trade payables	2,292	-	-	-	2,292
Other current liabilities	430	-	-	-	430
	4,756	**756**	**2,644**	**466**	**8,621**

The carrying amounts of these financial liabilities are assumed to approximate their fair values.

(d) Cash flow and fair value interest rate risk

The group's interest rate risk arises from long-term borrowings. Borrowings issued at variable rates expose the group to cash flow interest rate risk. Borrowings issued at fixed rates expose the group to fair value interest rate risk. At 31 December 2015, if variable interest rates on the euro-denominated borrowings and cash and cash equivalents had been 0.1% higher with all other variables held constant, post-tax results for the year would have been Euro 7,000 higher (2014: 15,000 higher) as a result of higher interest received. In 2015 we have not drawn our credit facility. The innovation loan had a fixed interest rate of 6.2% per year.

3.2 Capital management

The group's objective when managing capital is to safeguard the group's ability to continue as a going concern (also refer to 2.1.1) in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the group monitors capital on the basis of its adjusted solvability ratio. This ratio is calculated as adjusted equity divided by the adjusted balance sheet total.

The adjusted equity is calculated as equity:

- Plus liability to ordinary shareholders
- Minus the intangible assets, participating interests and receivables from shareholders

The adjusted balance sheet total is calculated as total assets:

- Minus the intangible assets, participating interest, receivables from shareholders and shares held in the own company

The adjusted solvability ratios at 31 December 2015 and 2014 were as follows:

in Euro x 1,000	**As at 31 December** **2015**	**2014**
Equity attributable to owners of the parent	9,358	21,014
Intangible assets	(359)	(228)
Adjusted equity total	8,999	20,786
Adjusted balance sheet total	22,553	35,141
Adjusted solvability ratio	**40%**	**59%**

4 Critical accounting estimates and judgments

Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

(a) Income taxes

The group, which has a history of recent tax losses, recognizes deferred tax assets arising from unused tax losses or tax credits only to the extent that the relevant fiscal unity has sufficient taxable temporary differences or there is convincing other evidence that sufficient taxable profit will be available against which the unused tax losses or unused tax credits can be utilized by the fiscal unity. Management's judgment is that there is not a high degree of certainty that sufficient profits will be earned to utilize the losses. Consequently, based on management's judgment, sufficient convincing other evidence is not available and a deferred tax asset is therefore not recognized.

(b) Share-based payments

Share options granted to employees are measured at the fair value of the equity instruments granted (indirect method of measurement). Fair value is determined through the use of an option-pricing model considering, among others, the following variables:

a) The exercise price of the option;
b) The expected life of the option;
c) The current value of the underlying shares;
d) The expected volatility of the share price, calculated considering the effect of dividends on stock price;
e) The dividends expected on the shares; and
f) The risk-free interest rate for the life of the option.

For the company's share option plan, management's judgment is that the Binomial method is most appropriate for determining fair values as this method allows accounting for non-transferability, vesting conditions and early exercise. Since the company is not listed, there is no published share price information. Consequently, the company needs to estimate the fair value of its shares and the expected volatility of that value. These assumptions and estimates are further discussed in note 12 p. [•] to the consolidated financial statements.

The result of the share option valuations and the related compensation expense is dependent on the model and input parameters used. Even though management considers the fair values reasonable and defensible based on the methodologies applied and the information available, others might derive at a different fair value for each of the company's share option plan.

(c) Research and development expenditures

The project stage forms the basis in the decision whether costs made for the group's product development programs should be capitalized or not. Management judgment is required in determining when the group should start capitalizing development costs as intangible assets.

Management determined that for a system commercial feasibility is, in general, probable when the group has built a successful prototype and has interested customers for the commercial product. Management determined that for product development (note 2.6 p. [•]) commercial feasibility is, in general, probable when the group has successfully completed essential testing phases and are in a late stage of discussions with potential partners for commercialization opportunities.

(d) Impairment of assets

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Assets that are not subject to amortization are tested annually for impairment. For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). The intangibles not subject to amortization are tested for impairment as part of this cash generating unit. The recoverable amount of the applicable cash-generating unit is determined based on value-in use calculations by using the discounted cash flow model.

In performing impairment testing of assets, management must make significant judgments and estimates to determine whether the present value of cash flows attributable to the cash-generating unit are less than the unit's carrying value. The above mentioned judgments and estimates are derived from the group's strategic plans and long-term forecasts. The discount rates used are estimated post-tax rates which reflect specific risks relating to the relevant segment.

(e) Revenue recognition

The group uses the percentage-of-completion ("POC") method in accounting for its fixed-price contracts to construct the Flowrence™ systems, the fixed-price contracts to deliver services and for revenue generated by discontinued operations by the fixed-price contracts to deliver the YXY polymer PEF to our partners. For the Flowrence™ systems the stage of completion is measured by reference to the total contract costs incurred up to the end of the reporting year as a percentage of total estimated costs for each contract. For services, use of the POC method requires the group to estimate the services performed to date as a proportion of the total services to be performed and for PEF deliveries, as part of discontinued operations, kilograms delivered as a proportion of the total volume to be delivered according to the fixed-price contract. To define the recognized revenues, the group estimates the required total costs (Flowrence™) or man-hours (Services) to complete each project.

(f) Provisions

In September 2014 the company extended the lease agreement for its facilities in Amsterdam at the Zekeringstraat 29 and 31. The term of this agreement is 10 years with options to extend and the operating lease commitments under the lease agreement are Euro 11.4 million (2014: 1.7 million). With the extension of the lease contract, the Euro 277,000 built-up decommissioning liability has been released due to new contract terms.

In December 2010 we signed a lease agreement for the pilot plant in Geleen for 5 years. Our operating lease commitments under the lease agreement at 31 December 2015 are Euro 0 (2014: 115,000). A new 10 year lease agreement will take effect after completion of the newly constructed pilot plant in 2016.

(g) Going Concern

For the critical accounting estimate with regard to the going concern assumption, we refer to note 2.1.1.

(h) Government grants

For considerations and assumptions in regards to the critical accounting estimate in relation with government grants, we refer to note 2.22 p. [•].

5 Property, plant and equipment

in Euro x 1,000	Leasehold improvements	Laboratory equipment and vehicles	Hardware	Office furniture and equipment	Construction in progress	Total
At 1 January 2014						
Cost	9,093	23,443	2,109	1,653	1,187	37,485
Accumulated depreciation	(5,254)	(18,987)	(2,037)	(1,601)	-	(27,879)
Net book amount	**3,839**	**4,457**	**72**	**51**	**1,187**	**9,606**
Year ended 31 December 2014						
Opening net book amount	3,839	4,457	72	51	1,187	9,606
Additions	258	486	-	31	860	1,635
Disposals	-	-	(41)	-	-	(41)
Transfers	7	1,636	41	-	(1,643)	41
Depreciation charge	(525)	(1,471)	(46)	(17)	-	(2,059)
Transferred to disposal group classified as held for sale	-	(1)	-	-	-	(1)
Closing net book amount	**3,579**	**5,106**	**27**	**65**	**405**	**9,180**
At 31 December 2014						
Cost	9,357	25,564	2,109	1,683	405	39,118
Accumulated depreciation	(5,779)	(20,459)	(2,083)	(1,618)	-	(29,938)
Net book amount	**3,578**	**5,105**	**27**	**65**	**405**	**9,180**
Year ended 31 December 2015						
Opening net book amount	3,578	5,105	27	65	405	9,180
Additions	17	708	70	10	1,437	2,242
Disposals	(110)	-	-	-	-	(110)
Transfers	(2)	748	-	-	(746)	-
Depreciation charge	(534)	(1,806)	(31)	(23)	-	(2,393)
Transferred to disposal group classified as held for sale	(319)	(3,672)	(5)	(9)	(898)	(4,903)
Closing net book amount	**2,630**	**1,084**	**62**	**44**	**197**	**4,017**
At 31 December 2015						
Cost	9,262	27,020	2,180	1,693	1,096	41,251
Accumulated depreciation	(6,313)	(22,264)	(2,113)	(1,641)	-	(32,331)
Transferred to disposal group classified as held for sale	(319)	(3,672)	(5)	(9)	(898)	(4,903)
Net book amount	**2,630**	**1,084**	**62**	**44**	**197**	**4,017**

The depreciation charge of Euro 568,000 as mentioned in the consolidated statement of cash flows is calculated by adding abovementioned Euro 2,393,000 for depreciation charges and deducting Euro 1,825,000 of depreciation charges within the disposal group classified as held for sale, refer to note 10.3 p. [•].

The additions and transfers are predominately related to investments in the pilot plant in Geleen.

The group is a lessee under a finance lease for enterprise software. The lease term is three years and ownership of the asset lies within the group. The laboratory equipment and software include a net book amount at 31 December 2015 of nil Euro (2014: Euro 5,000) where the group is lessee under finance leases:

(In Euro x 1,000)	**2015**	**2014**
Cost – capitalized finance leases	1,456	1,456
Accumulated depreciation	1,456	1,451
Net book amount	0	5

6 Intangible assets

(In Euro x 1,000)	Development costs	Software	Construction in progress	Other	Total
At 1 January 2014					
Cost	2,159	6,270	-	968	9,397
Accumulated amortization and impairment	(2,030)	(6,171)	-	(781)	(8,982)
Net book amount	**129**	**148**	**-**	**15**	**292**
Year ended 31 December 2014					
Opening net book amount	129	148	-	15	292
Additions	-	185	-	-	185
Transfers	-	(41)	-	-	(41)
Amortization charge	(129)	(80)	-	-	(209)
Transferred to disposal group classified as held for sale	(0)	-	-	-	(0)
Closing net book amount	**-**	**212**	**-**	**15**	**228**
At 31 December 2014					
Cost	2,159	6,455	-	968	9,582
Accumulated amortization and impairment	(2,159)	(6,250)	-	(781)	(9,190)
Net book amount	**-**	**212**	**-**	**15**	**228**
Year ended 31 December 2015					
Opening net book amount	-	212	-	15	228
Additions	-	108	83	-	191
Transfers	-	(6)	-	-	(6)
Amortization charge	-	(45)	-	(7)	(53)
Transferred to disposal group classified as held for sale	-	-	-	-	-
Closing net book amount	**-**	**268**	**83**	**8**	**359**
At 31 December 2015					
Cost	2,159	6,563	83	968	9,773
Accumulated amortization and impairment	(2,159)	(6,296)	-	(788)	(9,243)
Net book amount	**-**	**268**	**83**	**8**	**359**

Development costs

The development costs consisted of the development and prototype expenses of the Flowrence™ system and are all fully amortized. The sale of Avantium Pharmatech B.V. included the intellectual property and trademarks for the Crystal16™, Crystalline™ and CrystalBreeder™.

Software and Other intangibles

Software mainly comprises purchased general laboratory and office related software. Other intangibles are the in-kind contribution of a shareholder relating to software at the foundation of the group and compensation paid to a third party to exclusively use parts of their technology.

Impairment tests

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

7 Inventories

(In Euro x 1,000)	**2015**	**2014**
Raw materials	919	867
Finished goods	-	-
Work in progress	126	29
	1,045	**896**

The costs of inventories recognized as an expense and included in Cost of Goods Sold amounted to nil Euro (2014: nil).

8 Trade and other receivables

(In Euro x 1,000)	**2015**	**2014**
Trade receivables	2,595	5,006
Social security and other taxes	265	304
Prepayments	61	69
Unbilled revenue	1,801	-
Other receivables	364	126
Current portion	**5,086**	**5,505**

In 2015 no impairment of trade receivables was recorded and no write-offs of trade receivables were recognized. At 31 December 2015, trade receivables of Euro 1,095,000 were past due (30 days or more after invoice date) but not impaired, which is 42% of the total outstanding amount. The company does not foresee a risk of impairment considering the fact that a large portion of this balance have been collected after year-end and based on individual client payment history no provisions are deemed necessary. See also note 3.1 p.[•].

9 Cash and cash equivalents

(In Euro x 1,000)	**2015**	**2014**
Cash at bank and on hand	6,981	19,140
Cash and cash equivalents (excluding bank overdrafts)	**6,981**	**19,140**

Cash and cash equivalents include the following for the purpose of the statement of cash flows:

(In Euro x 1,000)	**2015**	**2014**
Cash and cash equivalents	6,981	19,140
Cash and cash equivalents	**6,981**	**19,140**

10 Assets held for sale and discontinued operations

In December 2014 Zwarte Zwaan Holding B.V. signed a conditional Share Purchase Agreement for selling 100% of the shares in Avantium Pharmatech B.V. to Technobis Group B.V. The purchase was closed and control shifted on 8 January 2015 with effective date 31 December 2014. As the result of the 95% subsidiary Zwarte Zwaan Holding B.V. is not attributable to the group, no consideration received is included or recorded in Avantium Holding. In accordance with IFRS 5, the assets and liabilities related to Avantium Pharmatech B.V. have been presented as held for sale. Subsequently, the group has dissolved Zwarte Zwaan Holding B.V. in December 2015 and we therefore present the results of Avantium Pharmatech B.V, and Zwarte Zwaan Holding B.V. as “discontinued operations”.

As per the 18th of December 2015, the company signed a memorandum of understanding with BASF SE, regarding the formation of a joint venture (JV) for the commercialization of Furan-Di-Carboxylic-Acid (FDCA), Poly-Ethylene-Furanoate (PEF) and the related technologies (YXY technology). The JV will engage in (i) the manufacturing and marketing of FDCA, (ii) marketing of PEF manufactured under toll-manufacturing arrangements, (iii) the licensing of FDCA and PEF production and application IP, as well as (iv) research and development on these technologies. Within Avantium Holding the entities involved in the transaction are YXY Technologies B.V. and Furanix Technologies B.V. BASF SE will hold a 51% share of the JV, where Avantium will hold the remaining 49%.

In accordance with IFRS 5.31 and 5.32, the component for sale (YXY Technologies), comprises operations and cash flows that can be clearly distinguished from the rest of the entity. Furthermore it can be concluded that the YXY business represents a separate major line of business as one of the three main pillars of Avantium, and therefore classifying as a discontinued operation. By the agreement of the MoU prior to year-end 2015, and as a result meeting the criteria of IFRS 5.8, the sale becomes highly probable. Therefore the YXY business is reported as assets held for sale in the financial statements.

The analysis of the result of the discontinued operations and assets held for sale are as follows:

in Euro x 1,000	**Year ended 31 December**	
	2015	**2014**
Discontinued operations		
Revenues	304	2,773
Expenses	(11,991)	(12,729)
Other income	1,859	57
Operating profit	**(9,828)**	**(9,899)**
Income tax expense	-	-
Loss for the period	**(9,828)**	**(9,899)**

10.1 Assets held for disposal

in Euro x 1,000	**As at 31 December**	
	2015	**2014**
Assets		
Property, plant and equipment	4,903	1
Intangible assets	-	-
Inventory	406	416
Trade and other receivables	116	3
Total assets	**5,424**	**420**

10.2 Liabilities of disposal group classified as held for sale

in Euro x 1,000	**As at 31 December**		
	2015		**2014**
Liabilities			
Innovation loan - Accrued interest	736		-
Trade and other payables	2,454		(83)
Provisions	-		21
Total liabilities	**3,190**	**-**	**62**

10.3 Cash flows

in Euro x 1,000	**Year ended 31 December**	
	2015	**2014**
Cash flows from operating activities		
Profit / (loss) for the year from discontinued operations	(9,828)	(9,899)
Adjustments for:		
- Depreciation	1,825	1,599
- Amortization	-	140
- Finance costs - net	2,620	228
Changes in working capital (excluding exchange differences on consolidation):		
- (Increase) in inventories	115	(138)
- (Increase) in trade and other receivables	633	237
- Increase in trade and other payables	809	1,366
- Increase in provisions	(21)	6
Net cash used in operating activities	**(3,847)**	**(6,461)**
Cash flows from financing activities		
Effect of exchange rate changes	0	21
Repayment profit participating loan	(1,650)	
Interest (paid) / received	(2,350)	-
Net cash used in financing activities	**(4,000)**	**21**
Change in cash from discontinued operations	**(7,847)**	**(6,440)**

11 Share capital and other reserves

11.1 Ordinary shares

The authorized share capital amounts to Euro 2,000,000 consisting of 200,000,000 ordinary shares, with a nominal value of Euro 0.01 each. The issued share capital at 31 December 2015 comprises of 131,866,911 ordinary shares (2014: 131,866,911). In 2015 nil options were exercised by employees and 20,000 employee shares were re-purchased. All 131,866,911 shares issued are fully paid and 20,412 shares are held in treasury.

11.2 Other reserves

The costs of equity settled share-based payments to employees are recognized in the statement of comprehensive income, together with a corresponding increase in equity during the vesting period, taking into account (deferral of) corporate income taxes. The accumulated expense of the share incentive plan recognized in the statement of comprehensive income is shown as a total of the equity category “other reserves” in the “consolidated statement of changes in equity”.

11.3 Non-controlling interest

The sale of Pharmatech B.V. by Zwarte Zwaan was closed and control shifted on 8 January 2015 with effective date 31 December 2014. Subsequently Zwarte Zwaan was dissolved in 2015, in which the company had a majority stake of 95%. As a result, the non-controlling interest of prior year of Euro 517,000 is no longer present in the equity position as of 31 December 2015.

11.4 Currency translation difference

The group does not hold a company reporting in any other currency than Euro and therefore does not hold a currency translation reserve.

12 Share-based payment

The company operates a share-based payment plan for its employees. This Avantium Option Plan, which was adopted in 2006, is classified as an equity-settled share option plan. Each option relates to one share. Eligible employees are offered options to purchase depositary receipts of ordinary shares in the company. The depositary receipts acquired upon exercise of options granted under the equity-settled Avantium Option Plan are blocked (i.e. may not be transferred, sold, assigned, charged, pledged or encumbered during a vesting period of three years) as follows: 33% of the depositary receipts will be unblocked following the first anniversary of the date of grant of the relevant options, an additional 33% of the depositary receipts will be unblocked following the second anniversary of the date of grant of the relevant options and the remaining 34% of the depositary receipts will be unblocked following the third anniversary of the date of grant of the relevant options. Granted options have a duration of 10 years.

In 2015 overall 1,579,320 (2014: 1,185,981) share options were granted to key employees of the group. 1,051,820 options were granted with an exercise price of Euro 0.01 per option, 527,500 with an exercise price of Euro 0.98.

In 2015, no options were exercised by employees.

The movements in outstanding options with the executive board, senior management and certain other employees can be summarized as follows:

	2015		2014	
	Number	Average exercise price (in Euro)	Number	Average exercise (in Euro)
Number of options 1 January	**8,536,626**	**0.07**	**7,455,171**	**0.06**
Number of options granted	1,579,320	0.33	1,185,981	0.10
Number of options exercised	-	-	(104,526)	(0.27)
Number of options forfeited	(10,000)	(0.01)	-	-
Number of options expired	-	-	-	-
Number of options outstanding 31 December	**10,105,946**	**0.11**	**8,536,626**	**0.07**

Avantium Holding B.V. has issued shares resulting from the exercise of options to the “Stichting Administratiekantoor Avantium’’ (the “Foundation”).

The Foundation has issued depository receipts to members of the Executive Board, senior management and certain other employees. The Foundation is a consolidated special purpose entity by Avantium Holding B.V., however the shares held by the Foundation only represent the voting rights associated with the issued shares and depository receipts representing all economic benefits are issued by the Foundation to members of the Executive Board, senior management and certain other employees and consequently the shares held by the Foundation are not considered treasury shares.

Share options outstanding at the end of the year have the following expiry date and exercise price:

Expiry date	Exercise price in Euro per option	Options 2015	Options 2014
19 October 2016	0.76	253,448	253,448
11 May 2017	0.76	135,494	135,494
1 October 2018	0.01	505,414	505,414
1 May 2019	0.01	701,911	701,911
1 May 2020	0.01	607,409	607,409
4 November 2020	0.01	769,000	769,000
30 November 2021	0.01	3,394,700	3,394,700
16 April 2022	0.01	100,000	100,000
14 December 2022	0.01	460,800	460,800
19 April 2023	0.01	235,000	235,000
20 August 2023	0.01	30,000	30,000
6 March 2024	0.01	633,450	643,450
1 September 2024	0.01	500,000	500,000
1 September 2024	0.98	200,000	200,000
15 April 2025	0.98	100,000	-
1 October 2025	0.01	1,051,820	-
1 October 2025	0.98	427,500	-
	0.11	**10,105,946**	**8,536,626**

All outstanding options are exercisable but still restricted by the vesting period. The fair value of options under the equity-settled Avantium Option Plan is determined using the Binomial option valuation model and the weighted average fair value of options granted during 2015 was Euro 1.26 per option (2014: Euro 0.94).

The significant inputs into this model were as follows:

	Oct-15	**Apr-15**	**Sep-14**	**Mar-14**	**Aug-13**
Input price	1.34	0.98	0.98	0.98	1.52
Volatility	106%	97%	88%	86%	88%
Risk free interest	0.72%	0.24%	0.20%	0.89%	1.14%
Dividend yield	-	-	-	-	-
Maturity	10 years	10 years	10 years	10 years	10 years
Early exercise rate	5%	5%	5%	5%	5%

The historical volatility used is based on the daily stock returns from a comparable listed company over a period equal to the maturities of each plan related to the valuation dates.

Following a review of the share and option plan, and a re-assessment of the share reserve, a total share-based payment reclassification of Euro 946,000 has been recorded in consolidated statement of changes in equity, based on the calculated fair value of the share options granted in 2015, 2014, 2013, and 2012 and their vesting periods. During the year a reclassification was made from other reserves to retained earnings to reflect the effect of exercised, forfeited and expired options of previous years within other reserves.

13 Earnings per share

(a) Earnings per share

Earnings per share for the years 2015 and 2014 are derived below:

Earnings per share	**2015**	**2014**
Loss from continuing operations	(3,350,000)	(4,456,000)
Loss from discontinued operation	(9,828,000)	(9,899,000)
Loss for the period - basic	**(13,178,000)**	**(14,355,000)**
Dillutive adjustments	-	-
Loss for the period - diluted	**(13,178,000)**	**(14,355,000)**
Weighted average number of ordinary shares	**131,866,911**	**131,866,911**
Options	8,985,140	8,085,525
Other relevant dilutive securities	-	-
Effect of dilutive securities	**8,985,140**	**8,085,525**
Weighted average number of shares - diluted	**140,852,051**	**139,952,436**
Earnings per share - basic	**(0.10)**	**(0.11)**
Earnings per share - diluted	**(0.09)**	**(0.10)**

Basic earnings per share are calculated by dividing the net result for the period by the weighted average number of ordinary shares. Diluted earnings per share are calculated by dividing the net results for the period on a diluted basis by the weighted average number of shares on a diluted basis.

(b) Basic earnings per share

	2015 (euro)	**2014 (euro)**
From continuing operations attributable to the ordinary equity holders of the company	(0.03)	(0.03)
From discontinued operation	(0.07)	(0.08)
Total basic earnings per share attributable to the ordinary equity holders of the company	**(0.10)**	**(0.11)**

(c) Diluted earnings per share

	2015 (euro)	2014 (euro)
From continuing operations attributable to the ordinary equity holders of the company	(0.02)	(0.03)
From discontinued operation	(0.07)	(0.07)
Total diluted earnings per share attributable to the ordinary equity holders of the company	**(0.09)**	**(0.10)**

14 Trade and other payables

(In Euro x 1,000)	2015	2014
Trade payables	1,555	2,292
Social security and other taxes	222	323
Holiday pay and holiday days	353	499
Other current liabilities	4,067	4,357
	6,196	**7,471**

The other current liabilities comprises of the operating lease commitment of rent, accrued expenses, pension costs, deferred revenues (Euro 788,000) and advances received in relation to government grants (Euro 296,000).

15 Borrowings

The carrying amounts of the group's borrowings are denominated in Euro.

Non-current		
(In Euro x 1,000)	**2015**	**2014**
Innovation loan	3,600	3,865
Finance lease liabilities	-	0
	3,600	**3,865**
Current		
(In Euro x 1,000)	**2015**	**2014**
Convertible bond	-	-
Loan Witte Zwaan Holding B.V.	-	1,650
Innovation loan	400	378
Finance lease liabilities	-	5
	400	2,033
Total borrowings	**4,000**	**5,898**

(a) Innovation loan

On 28 October 2010 Rijksdienst Voor Ondernemend Nederland (RVO) granted the group a Euro 4 million Innovation Loan facility, to be paid back between 2015 and 2020. The group started drawing the loan facility in 2012 and the group has currently drawn down Euro 4 million in full (of which the last remaining Euro 223,000 has been drawn down in 2015). This loan has a fixed interest rate of 6.2% per annum and the accumulated interest as part of discontinued operations is Euro 736,000 (Euro 26,000 for 2012, Euro 193,000 for 2013, Euro 247,000 for 2014, and Euro 270,000 for 2015). Contractually by June 30th 2016 a first term of 10% of the drawn amount has to be paid back. Pledged to RVO are all assets financed by this Innovation Loan facility and the group used it to finance part of the YXY Pilot Plant assets.

(b) Loan Witte Zwaan Holding B.V.

In 2012 the group sold the Profit Participating Loan (PPL) of Euro 1,650,000 for one Euro to Witte Zwaan Holding B.V. The loan is not interest bearing and has been repaid during 2015 as part of dissolving the Zwarte Zwaan Holding B.V.

(c) Bank overdrafts

At the end of 2015, the group has a unutilized banking facility with the ABN AMRO Bank of Euro 2.0 million with an interest rate determined on the basis of the average one-month EURIBOR +1,75% per annum. Also refer to note 25. At 31 December 2015 the group had not drawn down any amounts under this facility.

(d) Finance lease liabilities

The group leases certain enterprise software by means of finance leases, also refer to note 5 p. [•].

(In Euro x 1,000)	**2015**	**2014**
Gross finance lease liabilities – minimum lease		
No later than 1 year	-	5
Later than 1 year and no later than 5 years	-	0
Later than 5 years	-	-
	0	**5**
Future finance charges on finance leases	-	(1)
Present value of finance lease liabilities	**0**	**5**

The present value of finance lease liabilities is as follows:

No later than 1 year	-	5
Later than 1 year and no later than 5 years	-	0
Later than 5 years	-	-
	0	**5**

16 Provisions for other liabilities and charges

(In Euro x 1,000)	**Decommissioning Liability**	**Warranty provision**	**Total**
At January 1, 2014	**256**	**193**	**449**
Additional provision	-	143	143
Unwinding of discount	10	-	10
Unused amounts reversed	-	(21)	(21)
Used during the year	-	(31)	(31)
Transferred to disposal group classified as held for sale	-	(21)	(21)
At December 31, 2014	**266**	**264**	**530**
At January 1, 2015	**266**	**264**	**530**
Additional provision	-	52	52
Unwinding of discount	11	-	11
Unused amounts reversed	(277)	(146)	(423)
Used during the year	-	(3)	(3)
Transferred to disposal group classified as held for sale	-	-	-
At December 31, 2015	**0**	**168**	**168**

The provisions relate to the decommissioning liability for restoring leased property into its original condition and to warranty costs for delivered systems.

(a) Decommissioning liability

In February 2007 the company signed a lease agreement for its facilities in Amsterdam at the Zekeringstraat 29 and 31. The term of this agreement was 10 years with options to extend. The term included a provision to return the building into its original condition. Therefore a decommissioning liability was recognized. With a new 10 year contract taking effect in 2015, and the decommissioning provision no longer being part of the terms, the provision has been reversed in 2015.

(b) Warranty

The provision for warranty consists of estimated costs for repairs of installed products during the warranty period of one year. This estimate is based on historical experience of broken or repaired units and the costs associated with that. This provision is current (shorter than 1 year). Unused amounts are reversed after expiration of the warranty period.

17 Segment information

(a) Description of the segments and principal activities

Within the company the Management Team is considered the chief operating decision maker, consisting of the chief executive officer, chief financial officer, chief technology officer, chief operating officer, chief commercial officer, and the managing director of Catalysis, and has identified three separate segments (and the discontinued business of Pharmatech, sold in January 2015, for reference):

- Catalysis - parallel fixed bed reactor equipment for catalysis R&D at industrial conditions and process R&D projects for the industry, tailored to specific applications. Catalysis by Avantium offers two specific types of R&D Solutions for organizations looking to advance their catalysis and chemical process development.
- Renewable Chemistries - a portfolio of development projects based on renewable chemistry and catalytic process technology. The common basis, on which each activity rests, is formed by Avantium's unique technological capabilities that have been validated through the execution of millions of experiments, covering a broad range of chemistries, including highly complex and challenging R&D projects.
- YXY (assets held for sale and classifying as a discontinued operation) - The YXY technology platform helps us produce a wide range of novel materials and products, all 100% bio based, by converting plant-based sugars into chemical building blocks, like Furanics and Levulinics, for plastics and other applications. YXY is a game-changing technology that offers bio based products and fuels with superior properties at market competitive prices, enabling a green way of doing business.

(b) Adjusted EBITDA

The main KPI of the company within the profit & loss account is an adjusted EBITDA figure. Note that the Adjusted EBITDA number excludes overhead. The adjusted EBITDA is calculated in the following manner:

Operating profit / loss + depreciation & amortization -/- CAPEX

The adjusted EBITDA figures of the company segments are as follows.

(In Euro x 1,000)	**2015**	**2014**
Catalysis	2,898	1,979
New Chemistries	(797)	253
YXY	(8,482)	(9,499)
Total adjusted EBITDA	**(6,381)**	**(7,267)**

(c) Revenues per segment

(In Euro x 1,000)	**2015**	**2014**
Catalysis	10,266	9,605
New Chemistries	-	5
YXY	304	696
Total segment revenue	**10,570**	**10,306**

The segment revenue of Euro 10.6 million consists of the reported consolidated revenue of Euro 10.3 million and the Euro 0.3 million as part of discontinued operations, attributable to YXY.

(d) Reconciliation

(In Euro x 1,000)	**2015**	**2014**
Total adjusted EBITDA	**(6,381)**	**(7,267)**
Amortisation	(53)	(209)
Depreciation	(2,393)	(2,100)
Finance costs - net	(2,496)	(548)
CAPEX	2,317	1,820
Share based compensation	(1,005)	(935)
Rent	(1,042)	(701)
Release decommissioning provision	277	-
Results of discontinued operation	9,828	9,899
Other	(2,402)	(4,415)
Profit before income tax from continuing operations	**(3,350)**	**(4,456)**

(e) Other profit and loss disclosures

2015 *(in Euro x 1,000)*	**Release of decommissioning provision**	**Subsidies received**	**Depreciation and amortisation**	**Income Tax expense**
Catalysis	-	-	(310)	-
New Chemistries	-	1,307	(25)	-
YXY	-	108	(1,825)	-
Unallocated items	(277)	-	(286)	
Total	**(277)**	**1,415**	**(2,446)**	**-**

2014 *(in Euro x 1,000)*	**Release of decommissioning provision**	**Subsidies received**	**Depreciation and amortisation**	**Income Tax expense**
Catalysis	-	-	(269)	-
New Chemistries	-	1,576	(11)	-
YXY	-	38	(1,618)	-
Unallocated items	-	-	(410)	-
Total	**-**	**1,613**	**(2,309)**	**-**

18 Revenues

Reported consolidated revenue increased with 7% from Euro 9.6 million in 2014 to Euro 10.3 million in 2015, all recognized using the POC method, refer to note 2.21 p. [•]. Revenues per segment are reported under note 17 p. [•].

19 Expenses by nature

In 2015 the company has chosen to alter the reporting format of the consolidated statement of comprehensive income, by moving from expenses by function to expenses by nature. This brings our external reporting in line with internal reporting, and will additionally give more insight in the major company expense areas.

Overall operational costs in 2015 (Euro 13,739,000) are equal compared to 2014 (Euro 13,754,000). decreases occur due to lower direct selling expenses of Euro 509,000, and Euro 268,000 lower marketing and representation expenses, which is compensated by Euro 733,000 higher employee benefit expenses, mainly due to a higher share based compensation build-up and lower subsidy recognition in 2015.

Direct selling expenses in 2015 amounts to Euro 1,767,000 (2014: 2,276,000) and comprises of cost of goods sold, costs of laboratory consumables directly attributable to revenue projects, and other specific costs related to revenues.

Employee benefit expenses in 2015 amount to Euro 6,841,000 (2014: 6,108,000) and includes wages and salaries, social security costs, share options granted to directors and employees, pension costs, and government grants received. The group recognized total government grants of Euro 1,307,000 (2014: Euro 1,694,000) to contribute to the Avantium development program in Renewable Chemistries where efforts are focused on developing a new catalytic process for making bio based ethylene-glycol and on developing an economical viable chemical process to convert ligno-cellulosic biomass into high quality glucose as feedstock for bio based chemicals. Also refer to note 20 p. [•].

Office and housing expenses in 2015 amount to Euro 1,846,000 (2014: 1,356,000) and comprises of rent, other facility related costs, telephony, and other IT related office materials and costs. Laboratory expenses in 2015 amount to Euro 1,009,000 (2014: 1,197,000) and comprises of laboratory consumables, spare parts, maintenance and repair work in the laboratory, and small laboratory projects. The lower expenses realized in 2015 are due to a cost reduction program.

Marketing and representation expenses relate to external and internal marketing, communications, and business development efforts including travel, however excluding wages for internal business development staff, which is included under employee benefit expenses.

Other operating expenses in 2015 amount to Euro 94,000 (2014: 411,000) and comprises of external development costs, such as trials, and other general costs including company insurances. The release of the decommissioning provision of Euro 277,000 in 2015 is the main reason for the lower expenses realized. Also refer to note 16 p. [•].

Patent, license, legal and advisory costs include fees for food contact studies and regulatory filings.

20 Employee benefits

(In Euro x 1,000)	**2015**	**2014**
Wages and salaries	6,561	6,020
Subsidies granted	(1,307)	(1,576)
Government grants R&D (WBSO)	(455)	(423)
Social security costs	749	819
Share options granted to directors and employees (note 12)	1,005	935
Pension costs – defined contribution plans	288	333
	6,841	**6,108**
Number of full time equivalent employees at December 31	**127.2**	**128.6**

The average FTE during 2015 amounts to 127.2 (2014: 128.6). Abovementioned FTE numbers include YXY staff. Number of full time equivalent employees per December 31st 2015 excluding YXY was 82.0 (2014: 79.9).

The group received government grants in 2015 and 2014. In 2015 Euro 455,000 (2014: 423,000) government grants were recognized relating to research and development ("WBSO") and Euro 1,307,000 (2014: Euro 1,694,000) for other specific development projects related to development programs which were deducted from the employee benefits. This includes a Euro 78,000 write-off for a subsidy which was to be received from a subsidy consortium principal that filed for bankruptcy.

21 Finance income and costs

(In Euro x 1,000)	**2015**	**2014**
Finance costs:		
- Innovation loan	-	-
- Convertible bond	-	(469)
- Provisions: unwinding of discount	-	(10)
- Finance lease liabilities	-	(1)
- Net foreign exchange gains (loss)	59	40
- Interest current accounts	(60)	(159)
Finance costs	**(1)**	**(598)**
Finance income:		
- Interest current accounts	124	268
Finance income	**124**	**268**
Finance costs - net	**123**	**(330)**

The Finance costs for the Innovation loan are non-cash; interest is added to the principal amount of the loans. Also refer to note 15 p. [•].

22 Income tax expense

No tax charges or tax income have been recognized in 2015 since the company is in a loss making position and no deferred tax asset has been recognized for carry forward losses. The loss in 2015 is mainly driven by significant investments in the product development programs. As a result of the significant investment in our product development programs we do not expect any taxable income in the following year.

The company forms an income tax group with its subsidiaries, except for Avantium Knowledge Centre B.V. Under the standard conditions, the members of the tax group are jointly and severally liable for any taxes payable by the group.

Tax loss carry-forward is subject to a time limitation of nine years. In 2011 we have completed a fiscally approved transaction that decreased but at the same time extended a significant part of our losses carried forward. Fiscally IP was valued, annually being amortized over 10 years and ensuring the carry forward losses will increase again. The total amount of tax losses carried forward as of 31 December 2015 is estimated at Euro 86,861,000 and in 2023 a first part (the loss of 2012) will expire.

	2015	2014
(In Euro x 1,000)		
Current tax	-	-
Deferred tax	-	-
	-	-
Loss before tax	(13,178)	(14,356)
Temporary differences	-	-
Expenses not deductible for tax purposes	-	-
Tax losses for which no deferred income tax asset was recognized	(13,178)	(14,356)
Tax charge	-	-

The nominal tax rates and amounts in 2015 are 20% up to Euro 200,000 and 25% over Euro 200,000.

23 Dividends

The company declared no dividends for any of the years presented in these consolidated financial statements.

24 Cash flow statement

In the cash flow statement, purchases of property, plant and equipment comprise:

(In Euro x 1,000)	**2015**	**2014**
Additions according to note 5	2,126	1,635
Purchases of property, plant and	**2,126**	**1,635**

25 Contingencies

The bank guarantee that ABN AMRO Bank had issued on behalf of the group for a total amount of Euro 241,000 that covered the operating lease commitment to rent the site at the Zekeringstraat 29 – 31 for three months and decommissioning of the corridor between Penta 1 and Penta 2 has been cancelled. No new bank guarantee has been issued in combination with the new contract terms.

For our Euro 2 million credit facility, assets of the following legal entities, excluding the intangible assets and the finance lease assets are pledged to the ABN AMRO Bank:

- Avantium Holding B.V.
- Avantium Technologies B.V.
- Avantium Support B.V.
- Avantium Cleantech B.V.
- Avantium Chemicals B.V.

The consolidated statement of financial position of these entities form the credit base and the credit agreement requires a solvability ratio above 35%. The solvability ratio of the credit base was 71% on 31 December 2015. Based on the companies' cash flow forecast ABN AMRO Bank has extended the loan.

26 Commitments

Operating lease commitments

The operating lease commitment comprises a lease contract to rent the site at the Zekeringstraat 29 – 31 for a remaining Euro 11.4 million. The contract of the Zekeringstraat 29 – 31 expires in 2027.

The contract of the discontinued operation, the pilot plant in Geleen, has officially expired in November 2015 and upon completion of the new site in 2016 a new lease term of 10 years will take effect with a commitment for Euro 5.0 million.

The future aggregate minimum lease payments under non-cancellable operating leases for continuing operations are as follows:

(In Euro x 1,000)	2015	2014
No later than 1 year	953	840
Later than 1 year and no later than 5 years	3,812	809
Later than 5 years	6,593	-
	11,358	**1,649**

27 Related-party transactions

The following transactions were carried out with related parties:

a) Key management compensation

Key management is defined as those persons having legal authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity. Our key management comprises the members of the Executive Board and the Supervisory Board.

The following persons are members of the Executive Board at December 31, 2015:

- Tom van Aken, Chief Executive Officer
- Frank Roerink, Chief Financial Officer

The following persons are members of the Supervisory Board at December 31, 2015:

- Jan van der Eijk, chairman
- Michiel de Haan, vice chairman
- Claude Stoufs
- Denis Lucquin
- Jonathan Wolfson
- Gabrielle Reijnen

The total remuneration paid to or for the benefit of members of the Supervisory Board and of the Executive Board in 2015 amounted to Euro 154,000 and Euro 604,000 respectively. The following table provides the breakdown in the remuneration in 2015 of the members of the Executive Board and Supervisory Board:

2015 *(In Euro x 1,000)*	Salary	Bonus	Share-based payments	Post-employee benefits	2015 Total
Supervisory board	92	-	62	-	**154**
Executive board	410	71	96	27	**604**
	502	**71**	**158**	**27**	**758**

2014 *(In Euro x 1,000)*	Salary	Bonus	Share-based payments	Post-employee benefits	2014 Total
Supervisory board	100	-	89	-	189
Executive board	423	85	126	21	654
	523	**85**	**214**	**21**	**843**

b) Shares and share options held by key management

The Executive Board currently holds 336,500 shares, the Supervisory Board holds nil. The following table provides information on their share options:

Executive Board

Share Options	2015 Number	Exercise price (in	2014 Number	Exercise price (in
Number of options outstanding 1 January	**4,456,046**	**0.06**	**4,456,046**	**0.06**
Number of options granted	488,000	0.26	-	-
Number of options exercised			-	-
Number of options forfeited			-	-
Number expired			-	-
Number of options outstanding 31 December	**4,944,046**	**0.08**	**4,456,046**	**0.06**

In 2015 488,000 additional share options were granted to the Executive Board. The share-based payment to the Executive board of Euro 96,000 comprises of the part of the share-based compensation (note 12 p. [•]) contributable to the share options granted in previous years.

Supervisory Board

Share Options	2015 Number	Exercise price (in Euro)	2014 Number	Exercise price (in Euro)
Number of options outstanding 1 January	**200,000**	**0.01**	**200,000**	**0.01**
Number of options granted	100,000	0.98	-	-
Number of options exercised			-	-
Number of options forfeited			-	-
Number expired			-	-
Number of options outstanding 31 December	**300,000**	**0.33**	**200,000**	**0.01**

There are no related party transactions which would need to be disclosed other than those described above.

28 Events after the balance sheet date

In March 2016, we raised new funding of Euro 20 million from our existing partners, and from new investors PMV-TINA Comm. VA, and FMIP NV by signing a subordinated convertible loan agreement. Per the loan agreement, each of the lenders has the right but not the obligation to convert the convertible loan into shares upon the earlier of the completion date of a new financing round or the maturity date of 31 December 2021. On 25 March all investors signed the investment documentation. The committed investments have been received as per 31 March 2016.

INDEPENDENT AUDITOR'S REPORT

To: the general meeting and supervisory board of Avantium Holding B.V.

Report on the financial statements 2015

Our opinion

In our opinion:

- the accompanying consolidated financial statements give a true and fair view of the financial position of Avantium Holding B.V. as at 31 December 2015 and of its result and cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code;
- the accompanying company financial statements give a true and fair view of the financial position of Avantium Holding B.V. as at 31 December 2015 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

What we have audited

We have audited the accompanying financial statements 2015 of Avantium Holding B.V., Amsterdam ('the company'). The financial statements include the consolidated financial statements of Avantium Holding B.V. and its subsidiaries (together: 'the Group') and the company financial statements.

The consolidated financial statements comprise:

- the consolidated statement of financial position as at 31 December 2015;
- the following statements for 2015: the consolidated statements of comprehensive income, changes in equity and cash flows; and
- the notes, comprising a summary of significant accounting policies and other explanatory information.

The company financial statements comprise:

- the company balance sheet as at 31 December 2015;
- the company income statement for the year then ended;
- the notes, comprising a summary of the accounting policies and other explanatory information.

The financial reporting framework that has been applied in the preparation of the financial statements is EU-IFRS and the relevant provisions of Part 9 of Book 2 of the Dutch Civil Code for the consolidated financial statements and Part 9 of Book 2 of the Dutch Civil Code for the company financial statements.

The basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the section 'Our responsibilities for the audit of the financial statements' of our report.

We are independent of Avantium Holding B.V. in accordance with the 'Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten' (ViO) and other relevant independence requirements in the Netherlands. Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA).

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Executive Board and the Supervisory Board

Executive Board is responsible for:

- the preparation and fair presentation of the financial statements in accordance with EU-IFRS and with Part 9 of Book 2 of the Dutch Civil Code, and for the preparation of the Report of the Executive Board in accordance with Part 9 of Book 2 of the Dutch Civil Code; and for
- such internal control as Executive Board determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, Executive Board is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, Executive Board should prepare the financial statements using the going concern basis of accounting unless Executive Board either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so. Executive Board should disclose events and circumstances that may cast significant doubt on the company's ability to continue as a going concern in the financial statements.

The Supervisory Board is responsible for overseeing the company's financial reporting process.

Our responsibilities for the audit of the financial statements

Our responsibility is to plan and perform an audit engagement to obtain sufficient and appropriate audit evidence to provide a basis for our opinion. Our audit opinion aims to provide reasonable assurance about whether the financial statements are free from material misstatement. Reasonable assurance is a high but not absolute level of assurance which makes it possible that we may not detect all misstatements. Misstatements may arise due to fraud or error. They are considered to be material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

A more detailed description of our responsibilities is set out in the appendix to our report.

Report on other legal and regulatory requirements

Our report on the Report of the Executive Board and the other information

Pursuant to the legal requirements of Part 9 of Book 2 of the Dutch Civil Code (concerning our obligation to report about the Report of the Executive Board and the other information):

- We have no deficiencies to report as a result of our examination whether the Report of the Executive Board, to the extent we can assess, has been prepared in accordance with Part 9 of Book 2 of this code, and whether the information as required by Part 9 of Book 2 of the Dutch Civil Code has been annexed.
- We report that the Report of the Executive Board, to the extent we can assess, is consistent with the financial statements.

Amsterdam, 11 May 2016

PricewaterhouseCoopers Accountants N.V.

J. van Meijel RA

Appendix to our auditor's report on the financial statements 2015 of Avantium Holding B.V.

In addition to what is included in our auditor's report we have further set out in this appendix our responsibilities for the audit of the financial statements and explained what an audit involves.

The auditor's responsibilities for the audit of the financial statements

We have exercised professional judgement and have maintained professional scepticism throughout the audit in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error. Our audit consisted, among others of the following:

- Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the intentional override of internal control.
- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Executive Board.
- Concluding on the appropriateness of Executive Board's use of the going concern basis of accounting, and based on the audit evidence obtained, concluding whether a material uncertainty exists related to events and/or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report and are made in the context of our opinion on the financial statements as a whole. However, future events or conditions may cause the company to cease to continue as a going concern.
- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures, and evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Considering our ultimate responsibility for the opinion on the company's consolidated financial statements we are responsible for the direction, supervision and performance of the group audit. In this context, we have determined the nature and extent of the audit procedures for components of the group to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole. Determining factors are the geographic structure of the group, the significance and/or risk profile of group entities or activities, the accounting processes and controls, and the industry in which the group operates. On this basis, we selected group entities for which an audit or review of financial information or specific balances was considered necessary.

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

The above auditor's report is the original auditor's report that was issued on 11 May 2016 with respect to the financial statements for the period ending 31 December 2015. These financial statements also contained the report of the Executive and Supervisory board. For purposes of the Prospectus the report of the Executive and Supervisory board has been omitted.

CONSOLIDATED FINANCIAL INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2014

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

in Euro x 1,000		Year ended 31 December	
	Notes	**2014**	**2013**
Continuing operations			
Revenues	16	10,306	13,070
Cost of sales	17	(9,687)	(8,958)
Gross profit		**618**	**4,111**
Selling and marketing costs	17	(2,156)	(2,030)
Research and development costs	17	(9,744)	(8,807)
General and administrative costs	17	(2,938)	(3,548)
Operating loss		**(14,221)**	**(10,273)**
Finance income	19	268	202
Finance costs	19	(845)	(981)
Finance costs - net		**(577)**	**(779)**
Loss before income tax		**(14,798)**	**(11,053)**
Income tax expense	20	-	-
Loss for the year from continuing operations		**(14,798)**	**(11,053)**
Profit for the year from discontinued operations		**442**	**(73)**
Loss for the period		**(14,356)**	**(11,125)**
Other comprehensive income:			
Currency translation differences	11	-	-
Other comprehensive income for the year, net of tax		-	-
Total comprehensive income for the year		**(14,356)**	**(11,125)**
Result attributable to:			
Owners of the parent		(14,798)	(11,053)
Non-controlling interests		442	(73)
		(14,356)	**(11,125)**
Total comprehensive income attributable to:			
Owners of the parent		(14,798)	(11,053)
Non-controlling interests		442	(73)
		(14,356)	**(11,125)**

The notes on pages [•] 14-51 are an integral part of these consolidated financial statements.

CONSOLIDATED BALANCE SHEET

in Euro x 1,000	Notes	As at 31 December 2014	2013
Assets			
Non-current assets			
Property, plant and equipment	5	9,180	9,606
Intangible assets	6	228	292
Total non-current assets		9,408	9,898
Current assets			
Inventories	7	896	1,309
Trade and other receivables	8	5,505	4,917
Cash and cash equivalents (excluding bank overdrafts)	9	19,140	5,425
Total current assets		25,541	11,652
Assets held for sale	10	419	-
Total assets		**35,369**	**21,550**
Equity and liabilities			
Equity attributable to owners of the parent			
Ordinary shares	11	1,319	927
Share premium	11, 12	81,272	43,491
Other reserves	11, 12	5,207	4,272
Retained earnings		(66,784)	(51,986)
Total equity attributable to the owners of the parent		21,014	(3,296)
Non-controlling interest		517	75
Total equity		**21,531**	**(3,221)**
Liabilities			
Non-current liabilities			
Borrowings	14	3,866	5,651
Provisions for other liabilities and charges	15	266	256
		4,132	**5,907**
Current liabilities			
Borrowings	14	2,033	10,674
Trade and other payables	13	7,472	7,997
Provisions for other liabilities and charges	15	264	193
		9,769	**18,864**
Liabilities related to assets held for sale	10	(62)	-
Total liabilities		**13,838**	**24,771**
Total equity and liabilities		**35,369**	**21,550**

The notes on pages [•] 14-51 are an integral part of these consolidated financial statements.

The financial statements on pages [•] 14-51 are authorized for issue by the board of directors on 14 April 2015.

T.B. van Aken
Chief Executive Officer

F.C.H. Roerink
Chief Financial Officer

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

in Euro x 1,000

	Notes	Attributable to equity holders of the company: Ordinary shares	Share premium	Other reserves	Retained earnings	Total	Non-controlling interest	Total equity
Balance at 1 January 2013		**927**	**43,491**	**3,080**	**(40,934)**	**6,564**	**148**	**6,712**
Comprehensive income								
Result for the year		-	-	-	(11,053)	(11,053)	(73)	(11,125)
Other Comprehensive income for the year								
Total Comprehensive income for the year		-	-	**-**	**(11,053)**	**(11,053)**	**(73)**	**(11,125)**
Transactions with owners								
- Value of employee services	12	-	-	1,192	-	1,192	-	1,192
- Issue of ordinary shares	11	-	-	-	-	-	-	-
Total transactions with owners		**-**	**-**	**1,192**	**-**	**1,192**	**-**	**1,192**
Balance at 31 December 2013		**927**	**43,491**	**4,272**	**(51,986)**	**(3,296)**	**75**	**(3,221)**
Balance at 1 January 2014		927	43,491	4,272	(51,986)	(3,296)	75	(3,221)
Comprehensive income								
Result for the year		-	-	-	(14,798)	(14,798)	442	(14,356)
Other Comprehensive income for the year		-	-	-	-	-	-	-
Total Comprehensive income for the year		**-**	**-**	**-**	**(14,798)**	**(14,798)**	**442**	**(14,356)**
Transactions with owners								
- Value of employee services	12	-	-	935	-	935	-	935
- Issue of ordinary shares	11	392	37,781	-	-	38,173	-	38,173
Total transactions with owners		**392**	**37,781**	**935**	**-**	**39,108**	**-**	**39,108**
Balance at 31 December 2014		**1,319**	**81,272**	**5,207**	**(66,784)**	**21,014**	**517**	**21,531**

The notes on pages [•] 14-51 are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

in Euro x 1,000	Notes	Year ended 31 December 2014	2013
Cash flows from continuing operations			
Cash flows from operating activities			
Loss for the year from continuing operations		(14,798)	(11,053)
Adjustments for:			
- Depreciation	5, 10	2,099	1,951
- Amortization	6, 10	88	151
- Impairment	6	-	-
- Share-based payment	12	935	1,192
- Changes in provisions	10, 15	97	102
- Finance costs - net	19	577	778
Changes in working capital (excluding exchange differences on consolidation)			
- Inventories	7	31	(305)
- Trade and other receivables	8	(970)	(708)
- Trade and other payables	13	(457)	128
		(12,398)	(7,764)
Interest paid	19	(159)	(115)
Net cash used in operating activities		(12,557)	(7,879)
Cash flows from investing activities			
Purchases of property, plant and equipment (PPE)	5	(1,635)	(1,960)
Purchases of intangible assets excluding financial lease	6	(185)	(26)
Net cash used in investing activities		(1,820)	(1,986)
Cash flow from financing activities			
Proceeds from issuance of ordinary shares	11	27,035	-
Interest received	19	268	203
Innovation loan	14	-	1,222
Convertible bond	14	-	10,000
Repayments of borrowings	14	(5)	(5)
Net cash generated from financing activities		27,298	11,421
Net increase in cash, cash equivalents		**12,921**	**1,556**
Cash, cash equivalents and bank overdrafts at beginning of	9	5,425	3,904
Effect of exchange rate changes	19	26	2
Cash, cash equivalents and bank overdrafts from continuing operations at end of financial year		**18,373**	**5,462**
Cash flows from discontinued operations			
Net cash from/ (used in) operating activities	10	745	(37)
Net cash from/ (used in) investing activities	10	-	-
Net cash from/ (used in) financing activities	10	21	-
Change in cash from discontinued operations		**767**	**(37)**
Cash, cash equivalents and bank overdrafts at end of financial year		**19,140**	**5,425**

The notes on pages [•] 14-51 are an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1 General information

Avantium Holding B.V. ('the company') and its subsidiaries (together 'the group' develop and commercialize next generation bio-based plastics and chemicals based on our unique technological capabilities in advanced catalysis research & development. Over the years our company has established a leading market position in providing advanced catalysis services and systems. The group operates a pilot plant in Geleen, The Netherlands to further develop, test and prove its YXY technology. The company has its statutory seat at the Zekeringstraat 29-31, 1014 BV in Amsterdam, The Netherlands.

These consolidated financial statements are approved for issue by both the Supervisory Board and the Executive Board on 14 April 2015.

2 Summary of significant accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

2.1 Basis of preparation

The consolidated financial statements of Avantium Holding B.V. have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and IFRS Interpretations Committee (IFRS IC) applicable to companies reporting under IFRS. The consolidated financial statements have been prepared under the historical cost convention.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in note 4 p. [•].

2.1.1 Going concern

The net loss for the year 2014 amounts to Euro 14,356,000, and in anticipation of the Annual Meeting's adoption of the annual accounts, this has been added to the accumulated deficit resulting in a net equity of Euro 21.5 million. In May 2014, we raised Euro 26 million of new funding from our existing shareholders, from our development partners The Coca Cola Company, Danone and Alpla and from Swire Pacific Ltd. At the same time the Euro 10.0 million subordinated convertible loan from existing shareholders plus Euro 1.1 million of accrued interest (Euro 669,000 in 2013 and Euro 469,000 in 2014) has been converted into equity. In December 2014 we raised an additional Euro 1.3 million of new funding. All new funding minus Euro 0.2 million of costs results in an increased cash position at year end 2014 of Euro 19.1 million (2013: Euro 5.4 million). The company did not make use of the credit facility of Euro 2.0 million with ABN AMRO Bank and will keep the facility as an additional buffer. The company complies at year end with the solvability ratio as agreed with ABN AMRO Bank, also refer to note 3.2 p. [•].

Also for 2015 the group anticipates on a net loss including negative operating cash flows, but as a result of the funding activities undertaken and strict working capital management the group has maintained its short-term and medium-term liquidity position. We believe that the anticipated cash flows of our services and systems business and new funding activities closed finalized in 2014 are sufficient to meet the requirements for working capital, capital expenditures and R&D for at least the next twelve months from the date of this report. The group therefore continues to adopt the going concern basis in preparing its consolidated financial statements.

2.1.2 Changes in accounting policy and disclosures

(a) New standards, amendments and interpretations adopted by the group

The following standards have been adopted by the group for the first time for the financial year beginning on or after 1 January 2014. The impact on the group is as follows:

- Amendment to IAS 32, 'Financial instruments' Presentation' on offsetting financial assets and financial liabilities. This amendment clarifies that the right of set-off must not be contingent on a future event. It must also be legally enforceable for all counterparties in the normal course of business, as well as in the event of default, insolvency or bankruptcy. The amendment also considers settlement mechanisms. The amendment did not have a significant effect on the group financial statements.
- Amendments to IAS 36, 'Impairment of assets', on the recoverable amount disclosures for non-financial assets. This amendment removed certain disclosures of the recoverable amount of CGUs which had been included in IAS 36 by the issue of IFRS 13.
- Amendment to IAS 39, 'Financial instruments: Recognition and measurement' on the novation of derivatives and the continuation of hedge accounting. This amendment considers legislative changes to 'over-the-counter' derivatives and the establishment of central counterparties. Under IAS 39 novation of derivatives to central counterparties would result in discontinuance of hedge accounting. The amendment provides relief from discontinuing hedge accounting when novation of a hedging instrument meets specified criteria. The

group has applied the amendment and there has been no significant impact on the group financial statements as a result.
- IFRIC 21, ‘Levies’, sets out the accounting for an obligation to pay a levy if that liability is within the scope of IAS 37 ‘Provisions’. The interpretation addresses what the obligating event is that gives rise to pay a levy and when a liability should be recognized. The Group is not currently subjected to significant levies so the impact on the Group is not material.

Other standards, amendments and interpretations which are effective for the financial year beginning on 1 January 2014 are not material to the group.

(b) New standards, amendments and interpretations not yet adopted

A number of new standards and amendments to standards and interpretations are effective for annual periods beginning after 1 January 2014, and have not been applied in preparing the consolidated financial statements. None of these is expected to have a significant effect on the consolidated financial statements of the Group, except the following set out below:

- IFRS 9, ‘Financial instruments’, addresses the classification, measurement and recognition of financial assets and financial liabilities. The complete version of IFRS 9 was issued in July 2014. It replaces the guidance in IAS 39 that relates to the classification and measurement of financial instruments. IFRS 9 retains but simplifies the mixed measurement model and establishes three primary measurement categories for financial assets: amortized cost, fair value through OCI and fair value through P&L. The basis of classification depends on the entity’s business model and the contractual cash flow characteristics of the financial asset. Investments in equity instruments are required to be measured at fair value through profit or loss with the irrevocable option at inception to present changes in fair value in OCI not recycling. There is now a new expected credit losses model that replaces the incurred loss impairment model used in IAS 39. For financial liabilities there were no changes to classification and measurement except for the recognition of changes in own credit risk in other comprehensive income, for liabilities designated at fair value through profit or loss. IFRS 9 relaxes the requirements for hedge effectiveness by replacing the bright line hedge effectiveness tests. It requires an economic relationship between the hedged item and hedging instrument and for the ‘hedged ratio’ to be the same as the one management actually use for risk management purposes. Contemporaneous documentation is still required but is different to that currently prepared under IAS 39. The standard is effective for accounting periods beginning on or after 1 January 2018. Early adoption is permitted. The group is yet to assess IFRS 9’s full impact.
- IFRS 15, ‘Revenue from contracts with customers’ deals with revenue recognition and establishes principles for reporting useful information to users of financial statements about the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity’s contracts with customers. Revenue is recognized when a customer obtains control of a good or service and thus has the ability to direct the use and obtain the benefits from the good or service. The standard replaces IAS 18 ‘Revenue’ and IAS 11 ‘Construction contracts’ and related interpretations. The standard is effective for annual periods beginning on or after 1 January 2017 and earlier application is permitted. The group is yet to assess the impact of IFRS 15.

There are no other IFRSs or IFRIC interpretations that are not yet effective that would be expected to have a material impact on the Group.

2.2 Consolidation

(a) Subsidiaries

Subsidiaries are all entities over which the group has control. The group controls an entity when the group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the group. They are deconsolidated from the date that control ceases.

The group applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The group recognizes any non-controlling interest in the acquiree on an acquisition- by-acquisition basis, either at fair value or at the non-controlling interest’s proportionate share of the recognized amounts of acquiree’s identifiable net assets. Acquisition-related costs are expensed as incurred.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer’s previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measurement are recognized in profit or loss. Any contingent consideration to be transferred by the group is recognized at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognized in accordance with IAS 39 either in profit or loss or as a change to other comprehensive income.

Contingent consideration that is classified as equity is not re-measured, and its subsequent settlement is accounted for within equity.

The consolidated companies are listed below:

- Avantium Technologies B.V., Amsterdam (100%);
- Avantium Support B.V., Amsterdam (100%);
- Avantium Pharmatech B.V., Amsterdam (100% of Zwarte Zwaan Holding B.V.);
- Avantium Cleantech B.V., Amsterdam (100%);
- Avantium Chemicals B.V., Amsterdam (100%);
- Avantium Knowledge Centre B.V., Amsterdam (100%)
- Furanix Technologies B.V., Amsterdam (100%);
- YXY Technologies B.V., Amsterdam (100%);
- Stichting Administratiekantoor Avantium, Amsterdam (100%);
- Stichting Stock Options Avantium, Amsterdam (100%);
- Feedstock Technologies B.V., Amsterdam (100%)
- Zwarte Zwaan Holding B.V., Amsterdam (95%).

On 24 January 2012, the group sold 5% of the shares of Zwarte Zwaan Holding B.V. to Witte Zwaan Holding B.V., a legal entity not part of the group. Zwarte Zwaan Holding B.V. owns 100% of the shares of Avantium Pharmatech B.V. The result of the 95% subsidiary Zwarte Zwaan Holding B.V. is not distributed to all shareholders but only to a specific group of shareholders participating in Witte Zwaan Holding B.V. As equity is not attributable to the group we present the equity and result of Zwarte Zwaan Holding B.V. as “non-controlling interest”.

On 8 January 2015 Zwarte Zwaan Holding B.V. ceased to have control over Avantium Pharmatech B.V. as 100% of the shares of Avantium Pharmatech B.V. were sold to the Technobis Group B.V. with effective date 31 December 2014. Subsequently, the group aims to dissolve Zwarte Zwaan Holding B.V. in the first half of 2015. We therefore present the results of Avantium Pharmatech B.V. and Zwarte Zwaan Holding B.V. as “discontinued operations” and the balance sheet items of Avantium Pharmatech B.V. as “assets held for sale”.

Inter-company transactions, balances and unrealized gains on transactions between group companies are eliminated. Unrealized losses are also eliminated. When necessary amounts reported by subsidiaries have been adjusted to conform with the group’s accounting policies.

(b) Changes in ownership interests in subsidiaries without change of control

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the owners in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

(c) Disposal of subsidiaries

When the group ceases to have control any retained interest in the entity is re-measured to its fair value at the date when control is lost, with the change in carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity are accounted for as if the group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in other comprehensive income are reclassified to profit or loss.

2.3 Foreign currency translation

(a) Functional and presentation currency

Items included in the financial statements of each of the group’s entities are measured using the currency of the primary economic environment in which the entity operates (‘the functional currency’). The consolidated financial statements are presented in Euros, which is the company’s presentation currency.

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuations where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the statement of comprehensive income.

Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents are presented in the statement of comprehensive income within ‘finance income or cost’.

(c) Group companies

The results and financial position of all the group entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;

- Income and expenses for each statement of comprehensive income are translated at the average exchange rates; and
- All resulting exchange differences are recognized as a separate component of equity.

2.4 Use of estimates

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. For us, the use of estimates is or could be a significant factor affecting the reported carrying values of property, plant and equipment, intangibles, trade and other receivables and trade and other payables. Despite management's best efforts to accurately estimate such amounts, actual results could materially differ from those estimates.

2.5 Property, plant and equipment

Property, plant and equipment comprise mainly the pilot plant, laboratory equipment, hardware and leasehold improvements. All property, plant and equipment is stated at historical cost less accumulated depreciation. Historical cost includes expenditures that are directly attributable to the acquisition of the items. Leasehold improvements include capitalization of the estimated costs associated with removing and restoring the leased buildings into its original condition.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the group and the cost of the item can be measured reliably. All other repairs and maintenance charges are expensed in the financial period in which they are incurred.

Depreciation is calculated using the straight-line method to allocate their cost of the assets to their residual values over their estimated useful lives as follows:

− Leasehold improvements	5-20 years
− Machinery, laboratory equipment and vehicles	5 years
− Computer hardware	3 years
− Office furniture and equipment	3-5 years

The pilot plant is classified as 'Machinery' and will be depreciated in 5 years. New parts of the pilot plant which are classified as 'Construction in progress' will only be depreciated after finalization. The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount (also refer to note 2.6 p. [•]).

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount. Gains and losses are included in the consolidated statement of comprehensive income.

2.6 Intangible assets

(a) Research and development

Research expenditures are recognized as expenses as incurred. Development costs that are directly attributable to the design and testing of identifiable and unique products controlled by the group are recognized as intangible assets when the following criteria are fulfilled:

- It is technically feasible to complete the intangible asset so that it will be available for use or sale;
- Management intends to complete the intangible asset and use or sell it;
- There is an ability to use or sell the intangible asset;
- It can be demonstrated how the intangible asset will generate probable future economic benefits;
- Adequate technical, financial and other resources to complete the development and to use or sell the intangible asset are available; and
- The expenditure attributable to the intangible asset during its development can be reliably measured.

Current revenues are generated from products Crystal16™, Crystalline™ (both under assets held for sale) and Flowrence™ for which development expenses have been capitalized. The expenditures capitalized include the cost of materials, direct labor and an appropriate proportion of overheads.

Other development expenditures that do not meet these criteria are recognized as an expense as incurred. Development costs previously recognized as an expense are not recognized as an asset in a subsequent period. Capitalized development costs are recorded as intangible assets and amortized from the point at which the asset is ready for use on a straight-line basis over its estimated useful life of 5 years. Intangible assets not ready for use are tested for impairment at least on an annual basis.

Amortization of development costs is included in cost of sales in the statement of comprehensive income. All development costs arose from internal development.

(b) Computer software

Acquired computer software licenses are capitalized on the basis of the costs incurred to acquire and use the specific software. These costs are amortized over their estimated useful lives of 3 years.

Costs associated with developing or maintaining computer software programs are recognized as expenses as incurred. Development costs that are directly attributable to the design and testing of identifiable and unique software products controlled by the group, that will probably generate economic benefits exceeding costs beyond one year, are recognized as intangible assets.

2.7 Impairment of non-financial assets

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets other than goodwill that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

2.8 Non-current assets (or disposal groups) held for sale

Non-current assets (or disposal groups) are classified as assets held for sale when their carrying amount is to be recovered principally through a sale transaction and a sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell.

2.9 Financial assets

2.9.1 Classification

The group classifies its financial assets in the loans and receivables category. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of its financial assets at initial recognition.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for maturities greater than 12 months after the balance sheet date. These are classified as non-current assets. The group's loans and receivables comprise 'trade and other receivables' and 'cash and cash equivalents' in the balance sheet.

2.9.2 Recognition and measurement

Regular purchases and sales of financial assets are recognized on the trade-date, the date on which the group commits to purchase or sell the asset. Loans and receivables are subsequently carried at amortized cost using the effective interest method.

2.10 Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the company or the counterparty.

2.11 Impairment of financial assets

(a) Assets carried at amortized cost

The group assesses at the end of each reporting year whether there is objective evidence that a financial asset or group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganization, and where observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

For loans and receivables category, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced and the amount of the loss is recognized in the consolidated statement of comprehensive income. If a loan or held-to-maturity investment has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate determined under the contract. As a practical expedient, the group may measure impairment on the basis of an instrument's fair value using an observable market price.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized (such as an improvement in the debtor's credit rating), the reversal of the previously recognized impairment loss is recognized in the consolidated statement of comprehensive income.

(b) Assets classified as available for sale

The group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired.

2.12 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the first-in, first-out (FIFO) method. The cost of raw materials, finished goods and work in progress comprises all purchase costs including charges incurred to bring inventories to their current location and into their current state. It excludes borrowing costs. Net realizable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

2.13 Trade receivables

Trade receivables are amounts due from customers for products sold or services performed in the ordinary course of business. If collection is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade receivables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method, less provision for impairment.

2.14 Cash and cash equivalents

In the consolidated statement of cash flows, cash and cash equivalents includes cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less and bank overdrafts. In the consolidated balance sheet, bank overdrafts are shown within borrowings in current liabilities.

2.15 Share capital

Ordinary shares

Ordinary shares are classified as equity. Mandatorily redeemable preference shares are classified as liabilities. Incremental costs directly attributable to the issue of new ordinary shares or options are shown in equity as a deduction, net of tax, from the proceeds.

Treasury shares

Where any group company purchases the company's equity share capital (treasury shares), the consideration paid, including any directly attributable incremental costs (net of income taxes) is deducted from equity attributable to the company's equity holders until the shares are cancelled or reissued. Where such ordinary shares are subsequently reissued, any consideration received, net of any directly attributable incremental transaction costs and the related income tax effects, is included in equity attributable to the company's equity holders.

2.16 Trade payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

Trade payables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method.

2.17 Borrowings

Borrowings are recognized initially at fair value, net of transaction costs incurred. Borrowings are subsequently stated at amortized cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the statement of comprehensive income over the period of the borrowings using the effective interest method.

Fees paid on the establishment of loan facilities are recognized as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalized as a pre-payment for liquidity services and amortized over the period of the facility to which it relates.

2.18 Current and deferred income tax

The tax expense for the year comprises current and deferred tax. Tax is recognized in the statement of comprehensive income, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case the tax is also recognized in other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the company's subsidiaries and associates operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognized, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred income tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes assets and liabilities relate to income taxes levied by the same taxation authority on either the taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

2.19 Employee benefits

(a) Pension obligations

The group operates a defined contribution pension plan for all employees funded through payments to an insurance company. The group has no legal or constructive obligations to pay further contributions if the plan does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior years. The contributions are recognized as employee benefit expense when they are due. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

(b) Share-based payments

The group operates a share-based compensation plan for its employees, also refer to note 12 p. [•]. This plan is classified as an equity-settled share option plan which was adopted in 2006 (“Avantium Option Plan”).

Share options granted to employees are measured at the fair value of the equity instruments granted, or indirect method of measurement. Fair value is determined through the use of an option-pricing model considering, amongst others, the following variables:

a) The exercise price of the option;
b) The expected life of the option;
c) The current value of the underlying shares;
d) The expected volatility of the share price, calculated considering the effect of dividends on stock price;
e) The dividends expected on the shares; and
f) The risk-free interest rate for the life of the option.

For the company’s share option plan, management’s judgment is that the Binomial option valuation model is most appropriate for determining fair values as this model allows accounting for non-transferability, vesting conditions and early exercise. Until the listing of our shares, management needs to estimate the fair value of our shares and the expected volatility of that value. These assumptions and estimates are further discussed in note 12 to the IFRS consolidated financial statements. The result of the share option valuations and the related compensation expense is dependent on the model and input parameters used. Even though management considers the fair values reasonable and defensible based on the methodologies applied and the information available, others might derive at a different fair value for each of the company’s share option plan.

The costs of the employee share-based payment plan are measured by reference to the fair value of the options at the date at which the options are granted using a Binomial option valuation model. For the equity-settled Avantium Option Plan, the fair value is determined at the grant date.

The fair value of the employee services received in exchange for the grant of the options is recognized as an expense. For share-based payments that do not vest until the employees have completed a specified period of service, the group recognizes the services received as the employees render service during that period. The company treats each installment of a graded vesting award as a separate share option grant.

At each balance sheet date, the company revises its estimates of the number of options that are expected to become exercisable. It recognizes the impact of the revision of original estimates, if any, in the statement of comprehensive income and for the equity settled plan a corresponding adjustment to equity.

The proceeds received from exercised options net of any directly attributable transaction costs are credited to share capital (nominal value) and share premium.

(c) Profit-sharing and bonus plans

The group recognizes a liability and an expense for bonuses and profit-sharing where contractually obliged or where there is a past practice that has created a constructive obligation.

2.20 Provisions

Provisions are recognized when the group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount can be reliably estimated.

Provisions for decommissioning costs are based on current requirements to return the building into its original condition. The present value of the liability is calculated based on the estimated period of use of the related asset. The liability is recognized (together with a corresponding amount as part of the related property, plant and equipment) once an obligation is legal or constructive.

The group provides for the estimated cost of product warranties and product returns at the time revenue is recognized and the group has a constructive obligation. Warranty provision is established based on the group's best estimates of the amounts necessary to settle future and existing claims on products sold as of the balance sheet date. Product return provisions are based on our historical experiences.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation.

2.21 Revenue recognition

Revenue comprises the fair value of the consideration received or receivable for the sale of goods and services in the ordinary course of the group's activities. Revenue is shown net of value-added tax, returns, rebates and discounts and after eliminating sales within the group.

The group recognizes revenue when the amount of revenue can be reliably measured, it is probable that future economic benefits will flow to the entity and specific criteria have been met for each of the group's activities as described below. The group bases its estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

(a) Sales of goods

Revenue is generated by discontinued operations from the supply of goods (CrystalBreeder™, Crystal16™, and Crystalline™ systems) and recognized as soon as all substantial rights and risks relating to the title to the goods are transferred to the customer.

(b) Construction contracts

A construction contract is defined by IAS 11, 'Construction contracts', as a contract specifically negotiated for the construction of an asset.

Construction contract revenue and expense related to Flowrence™ systems are accounted for using the percentage-of-completion method, which recognizes revenue as performance of the contract progresses. The stage of completion is measured by reference to the contract costs incurred up to the end of the reporting period as a percentage of total estimated costs for each contract. Costs incurred in the year in connection with future activity on a contract are excluded from contract costs in determining the stage of completion.

On the balance sheet, the group reports the net contract position for each contract as either an asset or a liability. A contract represents an asset where costs incurred plus recognized profits (less recognized losses) exceed progress billings; a contract represents a liability where the opposite is the case.

Variations in contract work, claims and incentive payments are included in contract revenue to the extent that may have been agreed with the customer and are capable of being reliably measured.

Where the income of a construction contract cannot be estimated reliably, contract revenue that is probable to be recovered is recognized to the extent of contract costs incurred. Contract costs are recognized as expenses in the period in which they are incurred.

(c) Multiple element arrangements

In certain circumstances, it is necessary to apply the recognition criteria to the separately identifiable components of a single transaction in order to reflect the substance of the transaction. Conversely, the recognition criteria are applied to two or more transactions together when they are linked in such a way that the commercial effect cannot be understood without reference to the series of transactions as a whole.

The group offers arrangements whereby a customer purchases systems and installations services under one arrangement. When such multiple element arrangements exist, an element is accounted for as a separable element if it has value to the customer on a standalone basis and the fair value can be determined objectively and reliably.

When Chemical Systems revenues and installation service revenues are identified as separable elements in a multiple element transaction, the Systems revenue recognized is determined based on the fair value of the Systems in relation to the fair value of the arrangement taken as a whole and is recognized as discussed above.

The revenue relating to the installation service element, which represents the fair value of the installation services in relation to the fair value of the arrangement, is recognized upon completion of the installation services.

This separation is justified due to the fact that the supply and installation of the goods are offered to the customer separately as the installation can also be executed by an independent third party.

Timing of payment by the customer from the supply of goods is based on the contractual identified installments. This could result, on a product by product basis, in advanced payments. These amounts are reported on the balance sheet under other current liabilities.

(d) Sales of services

Revenue from the sale of services is recognized under the percentage-of-completion ("POC") method. Under the POC method, revenue is generally recognized based on the services performed to date as a percentage of the total services to be performed.

Timing of payment by the customer from sale of services is based on the contractual identified technical milestones. This could result, on a project by project basis, in unbilled revenues or advanced payments. These amounts are reported on the balance sheet under other receivables or other current liabilities.

For joint development agreements to further develop, test and prove the YXY technology, management identified milestones and PEF deliveries as included in the agreements as basis to determine revenue recognition in accordance with the POC method.

If circumstances arise that may change the original estimates of revenues, costs or extent of progress toward completion, estimates are revised. These revisions may result in increases or decreases in estimated revenues or costs and are reflected in income in the period in which the circumstances that give rise to the revision become known by management.

2.22 Government grants

Grants from the government are recognized at their fair value where there is a reasonable assurance that the grant will be received and the group will comply with all attached conditions.

Government grants relating to costs are deferred and recognized in the income statement over the period necessary to match them with the costs that they are intended to compensate.

Government grants relating to property, plant and equipment are included in non-current liabilities as deferred government grants and are credited to the income statement on a straight-line basis over the expected lives of the related assets.

2.23 Interest Income

Interest income is recognized using the effective interest method. When a loan and receivable is impaired, the group reduces the carrying amount to its recoverable amount, being the estimated future cash flow discounted at the original effective interest rate of the instrument, and continues unwinding the discount as interest income. Interest income on impaired loan and receivables is recognized using the original effective interest rate.

2.24 Leases

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the statement of comprehensive income on a straight-line basis over the period of the lease.

The group leases certain property, plant and equipment. Leases of property, plant and equipment where the group has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalized at the lease's commencement at the lower of the fair value of the leased property and the present value of the minimum lease payments.

Each lease payment is allocated between the liability and finance charges. The corresponding rental obligations, net of finance charges, are included in other long-term payables. The interest element of the finance cost is charged to the income statement over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant and equipment acquired under finance leases is depreciated over the shorter of the useful life of the asset and the lease term.

3 Financial risk management

3.1 Financial risk factors

The group's activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. The group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the group's financial performance.

Risk management is carried out by the central Finance & Accounting department ("Group F&A") under policies approved by the board of directors. Group F&A identifies, evaluates and covers financial risks in close co-operation with the group's operating units. The board provides principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of non-derivative financial instruments, and investment of excess liquidity.

Financial instrument by category

Loans and receivables:

in Euro x 1,000		As at 31 December	
	Notes	**2014**	**2013**
Trade receivables	8	5,006	4,239
Other receivables	8	430	554
Cash and cash equivalents	9	19,140	5,425

Financial liabilities:

in Euro x 1,000		As at 31 December	
	Notes	**2014**	**2013**
Trade payables	13	2,292	3,290
Finance lease liabilities	14	5	9
Other liabilities	13	4,357	3,914

Also refer to note 13 p. [•] and 14 p. [•] for an overview of Trade and other payables and Borrowings.

(a) Currency risk

The group operates internationally and is exposed to foreign exchange risk primarily with respect to the US dollar. Foreign exchange risk arises from future commercial transactions, recognized assets and liabilities. Management has set up a policy that requires group companies to manage their foreign exchange risk against their functional currency. The group companies are required to close commercial transactions in Euros. Certain US based customers negotiate US dollar contracts. The numbers of those contracts are very limited and the group companies can close such contract only after written approval of management, and therefore the group's operations are not subject to significant foreign exchange rate risks. Foreign exchange risk arises when future commercial transactions or recognized assets and liabilities are denominated in a currency that is not the entity's functional currency.

The group had outstanding trade receivables in US dollars 343,000 (2013: US dollars 586,000) and in US dollars 219,000 (2013: US dollars 285,000) outstanding trade payables. The group had no trade receivables or trade payables in other foreign currencies.

At 31 December 2014, if the currency had weakened by 10% against the US dollar with all other variables held constant, post-tax result for the year would have been Euro 53,000 higher (2013: Euro 48,000 higher) as the cash position included US Dollar 580,000. The group had no cash position in other foreign currencies.

(b) Credit risk

Credit risk is managed on group basis. The group does not have any significant concentrations of credit risk and is limited to outstanding trade receivables and cash and cash equivalents. On 31 December 2014, the largest single client exposure consisted of 16% of the outstanding trade receivables. The group clients are subject to creditworthiness tests. Sales are subject to payment conditions varying between payments in advance and 30 days after invoice date. For certain projects, deviations to this rule may apply only after approval of group F&A, in which case additional security, including guarantees and documentary credits, may be required. Management does not expect any losses from non-performance by its clients.

In 2014 nil Euro (2013: nil Euro) is written off and Euro 891,000 was past due.

in Euro x 1,000	As at 31 December	
	2014	**2013**
Up to 3 months past due	731	697
3 – 6 months past due	160	-
	891	**697**

The maximum exposure to credit risk at the reporting date is the carrying value of each class of receivable mentioned above. The group does not hold any collateral as security.

(c) Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed credit facilities and the ability to close out market positions.

At the end of 2014, the group has a banking facility with the ABN AMRO Bank of Euro 2.0 million. All assets, excluding the intangible assets and the finance lease assets are pledged to the ABN AMRO Bank. Management monitors monthly rolling forecasts of the group's cash and cash equivalents (note 9) on the basis of actual results and expected cash flow.

The table below analyses the group's financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet to the contractual maturity. The amounts disclosed in the table are the contractual undiscounted cash flows. The specific time buckets are not mandated by the standard but are based on a choice of management.

At 31 December 2014:

in Euro x 1,000	**Less than 1 year**	**Between 1 and 2 years**	**Between 2 and 5 year**	**Over 5 years**	**Total**
Borrowings (ex finance lease liabilities)	2,028	755	2,644	466	5,893
Finance lease liabilities	5	0	-	-	5
Trade payables	2,292	-	-	-	2,292
Other current liabilities	430	-	-	-	430
	4,756	**756**	**2,644**	**466**	**8,621**

At 31 December 2013:

in Euro x 1,000	**Less than 1 year**	**Between 1 and 2 years**	**Between 2 and 5 year**	**Over 5 years**	**Total**
Borrowings (ex finance lease liabilities)	-	1,850	1,800	1,996	5,646
Finance lease liabilities	4	5	-	-	9
Trade payables	3,290	-	-	-	3,290
Other current liabilities	554	-	-	-	554
	3,848	**1,855**	**1,800**	**1,996**	**9,498**

The carrying amounts of these financial liabilities are assumed to approximate their fair values.

(d) Interest rate risk

At 31 December 2014, if variable interest rates on the euro-denominated borrowings and cash and cash equivalents had been 0.1% higher with all other variables held constant, post-tax results for the year would have been Euro 15,000 higher (2013: 8,000 higher) as a result of higher interest received. In 2014 we have not drawn our credit facility. The convertible loan had a fixed interest rate of 1% per month and the innovation loan of 6.2% per year.

3.2 Capital management

The group's objective when managing capital is to safeguard the group's ability to continue as a going concern (also refer to 2.1.1 p. [•]) in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the group monitors capital on the basis of its adjusted solvability ratio. This ratio is calculated as adjusted equity divided by the adjusted balance sheet total.

The adjusted equity is calculated as equity:

- Plus liability to ordinary shareholders
- Minus the intangible assets, participating interests and receivables from shareholders

The adjusted balance sheet total is calculated as total assets:

- Minus the intangible assets, participating interest, receivables from shareholders and shares held in the own company

The adjusted solvability ratio's at 31 December 2014 and 2013 were as follows:

	As at 31 December	
in Euro x 1,000	**2014**	**2013**
Equity attributable to owners of the parent	21,014	(3,221)
Convertible bond	-	10,669
Intangible assets	(228)	(292)
Adjusted equity total	20,786	7,156
Adjusted balance sheet total	35,141	21,258
Adjusted solvability ratio	**59%**	**34%**

3.3 Fair value estimation

Effective 1 July 2014, the group adopted the amendment to IFRS 13 for financial instruments that are measured in the balance sheet at fair value, this requires disclosure of fair value measurements by level of the following fair value measurement hierarchy:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (level 2).
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (level 3).

The group does not hold any financial instruments traded in active markets. For the finance lease liabilities we refer to note 14 p. [•].

4 Critical accounting estimates and judgments

Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

(a) Income taxes

The group, which has a history of recent tax losses, recognizes deferred tax assets arising from unused tax losses or tax credits only to the extent that the relevant fiscal unity has sufficient taxable temporary differences or there is convincing other evidence that sufficient taxable profit will be available against which the unused tax losses or unused tax credits can be utilized by the fiscal unity. Management's judgment is that there is not a high degree of certainty that sufficient profits will be earned to utilize the losses. Consequently, based on management's judgment, sufficient convincing other evidence is not available and a deferred tax asset is therefore not recognized.

(b) Share-based payments

Share options granted to employees are measured at the fair value of the equity instruments granted (indirect method of measurement). Fair value is determined through the use of an option-pricing model considering, among others, the following variables:

a) The exercise price of the option;
b) The expected life of the option;
c) The current value of the underlying shares;
d) The expected volatility of the share price, calculated considering the effect of dividends on stock price;
e) The dividends expected on the shares; and
f) The risk-free interest rate for the life of the option.

For the company's share option plan, management's judgment is that the Binomial method is most appropriate for determining fair values as this method allows accounting for non-transferability, vesting conditions and early exercise. Since the company is not listed, there is no published share price information. Consequently, the company needs to estimate the fair value of its shares and the expected volatility of that value. These assumptions and estimates are further discussed in note 12 to the consolidated financial statements.

The result of the share option valuations and the related compensation expense is dependent on the model and input parameters used. Even though management considers the fair values reasonable and defensible based on the methodologies applied and the information available, others might derive at a different fair value for each of the company's share option plan.

(c) Research and development expenditures

The project stage forms the basis in the decision whether costs made for the group's product development programs should be capitalized or not. Management judgment is required in determining when the group should start capitalizing development costs as intangible assets.

Management determined that for a system commercial feasibility is, in general, probable when the group has built a successful prototype and has interested customers for the commercial product. Management determined that for product development (note 2.6 p.[•]) commercial feasibility is, in general, probable when the group has successfully completed essential testing phases and started discussions with potential partners for the commercialization opportunities.

(d) Impairment of assets

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Assets that are not subject to amortization are tested annually for impairment. For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). The intangibles not subject to amortization are tested for impairment as part of this cash generating unit. The recoverable amount of the applicable cash-generating unit is determined based on value-in use calculations by using the discounted cash flow model.

In performing impairment testing of assets, management must make significant judgments and estimates to determine whether the present value of cash flows attributable to the cash-generating unit are less than the unit's carrying value. The above mentioned judgments and estimates are derived from the group's strategic plans and long-term forecasts. The discount rates used are estimated post-tax rates which reflect specific risks relating to the relevant segment.

(e) Revenue recognition

The group uses the percentage-of-completion ("POC") method in accounting for its fixed-price contracts to construct the Flowrence™ systems, the fixed-price contracts to deliver services and the fixed-price contracts to deliver the YXY polymer PEF to our partners. For the Flowrence™ systems the stage of completion is measured by reference to the total contract costs incurred up to the end of the reporting year as a percentage of total estimated costs for each contract. For services, use of the POC method requires the group to estimate the services performed to date as a proportion of the total services to be performed and for PEF deliveries kilograms delivered as a proportion of the total volume to be delivered according to the fixed-price contract. To define the recognized revenues, the group estimates the required total costs (Flowrence™) or man-hours (Services) to complete each project.

(f) Provisions

In February 2007 the company signed a lease agreement for its facilities in Amsterdam at the Zekeringstraat 29 and 31. The term of this agreement is 10 years with options to extend and the operating lease commitments under the lease agreement are Euro 1.7 million (2013: 2.4 million). The term includes also a provision to return the building into its original condition. Therefore a decommissioning liability is recognized. The estimate for the decommissioning liability is based on an estimated number of hours and hourly rate, based on historical experience and external costs using an interest percentage of 5%. The company is reasonable certain that the option to extend for 10 years will be used. Therefore the present value of the decommissioning liability is calculated based on the assumption that the costs will occur after 20 years.

In December 2010 we signed a lease agreement for the pilot plant in Geleen for 5 years. Our operating lease commitments under the lease agreement at 31 December 2014 are Euro 115,000 (2013: 234,000).

(g) Going Concern

For the critical accounting estimate with regard to the going concern assumption, we refer to note 2.1.1 p. [•].

(h) Loss of Control

In assessment of the sale of Avantium Pharmatech B.V. as of post balance sheet date, for the critical accounting estimate with regard to loss of control, we refer to note 2.2 p. [•].

5 Property, plant and equipment

in Euro x 1,000	Leasehold improvements	Laboratory equipment and vehicles	Hardware	Office furniture and equipment	Construction in progress	Total
At 1 January 2013						
Cost	8,577	22,876	2,099	1,637	435	35,625
Accumulated depreciation	(4,731)	(17,662)	(1,949)	(1,585)	-	(25,928)
Net book amount	**3,846**	**5,214**	**150**	**52**	**435**	**9,697**
Year ended 31 December 2013						
Opening net book amount	3,846	5,214	150	52	435	9,697
Additions	153	393	10	16	1,388	1,960
Disposals	-	(51)	-	-	-	(51)
Transfers	363	225	-	-	(637)	(49)
Depreciation charge	(523)	(1,325)	(88)	(16)	-	(1,952)
Closing net book amount	**3,839**	**4,457**	**72**	**51**	**1,187**	**9,606**
At 31 December 2013						
Cost	9,093	23,443	2,109	1,653	1,187	37,485
Accumulated depreciation	(5,254)	(18,987)	(2,037)	(1,601)	-	(27,879)
Net book amount	**3,839**	**4,457**	**72**	**51**	**1,187**	**9,606**
Year ended 31 December 2014						
Opening net book amount	3,839	4,457	72	51	1,187	9,606
Additions	258	486	-	31	860	1,635
Disposals	-	-	(41)	-	-	(41)
Transfers	7	1,636	41	-	(1,643)	41
Depreciation charge	(525)	(1,471)	(46)	(17)	-	(2,059)
Transferred to disposal group classified as held for sale	-	(1)	-	-	-	(1)
Closing net book amount	**3,579**	**5,106**	**27**	**65**	**405**	**9,180**
At 31 December 2014						
Cost	9,357	25,564	2,109	1,683	405	39,118
Accumulated depreciation	(5,779)	(20,459)	(2,083)	(1,618)	-	(29,938)
Net book amount	**3,579**	**5,106**	**27**	**65**	**405**	**9,180**

The depreciation charge of Euro 2,099,000 as mentioned in the consolidated statement of cash flows is calculated by adding Euro 41,000 for disposals, Euro 2,059,000 for depreciation charges and deducting Euro 1,000 of depreciation charges within the disposal group classified as held for sale, refer to note 10.3 p. [•].

The additions and transfers are predominately related to investments in the pilot plant in Geleen.

The group is a lessee under a finance lease for enterprise software. The lease term is three years and ownership of the asset lies within the group. The laboratory equipment and software include a net book amount at 31 December 2014 of 5,000 Euro (2013: Euro 10,000) where the group is lessee under finance leases:

(In Euro x 1,000)	**2014**	**2013**
Cost – capitalized finance leases	1,456	1,456
Accumulated depreciation	1,451	1,446
Net book amount	5	10

Depreciation expense of Euro 219,000 (2013: -149,000) has been charged in 'cost of sales', Euro 1,619,000 (2013: 1,342,000) in 'research and development costs' and Euro 262,000 (2013: 317,000) in 'general and administrative costs'. Euro 41,000 was depreciated for assets classified as held for sale.

6 Intangible assets

(In Euro x 1,000)	Development costs	Software	Other	Total
At 1 January 2013				
Cost	2,159	6,231	968	9,358
Accumulated amortization and impairment	(1,860)	(6,042)	(659)	(8,561)
Net book amount	**299**	**189**	**310**	**797**
Year ended 31 December 2013				
Opening net book amount	299	189	310	797
Additions	-	39	-	39
Transfers	-	49	-	49
Amortization charge	(170)	(129)	(122)	(421)
Impairment	-	-	(172)	(172)
Closing net book amount	**129**	**148**	**15**	**292**
At 31 December 2013				
Cost	2,159	6,270	968	9,397
Accumulated amortization and impairment	(2,030)	(6,171)	(781)	(8,982)
Net book amount	**129**	**148**	**15**	**292**
Year ended 31 December 2014				
Opening net book amount	129	148	15	292
Additions	-	185	-	185
Transfers	-	(41)	-	(41)
Amortization charge	(129)	(80)	-	(209)
Transferred to disposal group classified as held for sale	(0)	-	-	(0)
Closing net book amount	**-**	**212**	**15**	**228**
At 31 December 2014				
Cost	2,159	6,455	968	9,582
Accumulated amortization and impairment	(2,159)	(6,250)	(781)	(9,190)
Net book amount	**-**	**212**	**15**	**228**

The amortization charge of Euro 88,000 as mentioned in the consolidated statement is calculated by Euro 209,000 of abovementioned amortization charges and deducting Euro 121,000 of depreciation charges within the disposal group classified as held for sale, refer to note 10.3 p. [•].

Amortization of Euro 42,000 (2013: 198,000) is included in the ‘cost of sales’ in the income statement; Euro 19,000 (2013: 29,000) in ‘research and development costs’ and Euro 27,000 (2013: 351,000) in ‘general and administrative costs’. Euro 118,000 was amortized for assets classified as held for sale.

Development costs

The development costs consisted of the development and prototype expenses of the systems Crystal16™, Crystalline™, CrystalBreeder™ and Flowrence™ and are all fully amortized. The sale of Avantium Pharmatech B.V. included the intellectual property and trademarks for the Crystal16™, Crystalline™ and CrystalBreeder™.

Software and Other intangibles

Software mainly comprises purchased general laboratory and office related software. Other intangibles are the in-kind contribution of a shareholder relating to software at the foundation of the group and compensation paid to a third party to exclusively use parts of their technology.

Impairment tests

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset’s carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset’s fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

7 Inventories

(In Euro x 1,000)	**2014**	**2013**
Raw materials	867	741
Finished goods	-	383
Work in progress	29	186
	896	**1,309**

The costs of inventories recognized as an expense and included in Cost of Sales' amounted to nil Euro (2013: nil).

8 Trade and other receivables

(In Euro x 1,000)	**2014**	**2013**
Trade receivables	5,006	4,239
Social security and other taxes	304	382
Other receivables	126	171
Prepayments and accrued income	69	125
Current portion	**5,505**	**4,917**

In 2014 no impairment of trade receivables was recorded and no write-offs of trade receivables were recognized. At 31 December 2014, trade receivables of Euro 891,000 were past due (30 days or more after invoice date) but not impaired, which is 18% of the total outstanding amount. See also note 3.1 p. [•].

9 Cash and cash equivalents

(In Euro x 1,000)	**2014**	**2013**
Cash at bank and on hand	19,140	5,425
Cash and cash equivalents (excluding bank overdrafts)	**19,140**	**5,425**

Cash and cash equivalents include the following for the purpose of the statement of cash flows:

(In Euro x 1,000)	**2014**	**2013**
Cash and cash equivalents	19,140	5,425
Bank overdrafts (note 13)	-	-
Cash and cash equivalents	**19,140**	**5,425**

The Cash at bank and on hand includes an amount of Euro 1.4 million that is restricted and not freely available but attributable to the owners of Zwarte Zwaan Holding B.V. only. Refer to note 2.2 p. [•] for an overview of all consolidated entities.

10 Assets held for sale and discontinued operations

In December 2014 Zwarte Zwaan Holding B.V. signed a conditional Share Purchase Agreement for selling 100% of the shares in Avantium Pharmatech B.V. to Technobis Group B.V. The purchase was closed and control shifted on 8 January 2015 with effective date 31 December 2014. In accordance with IFRS 5, the assets and liabilities related to Avantium Pharmatech B.V. have been presented as held for sale.

Subsequently, the group aims to dissolve Zwarte Zwaan Holding B.V. in the first half of 2015 and we therefore present the results of Avantium Pharmatech B.V, and Zwarte Zwaan Holding B.V. as "discontinued operations".

The analysis of the result of Pharma systems is as follows:

in Euro x 1,000	**Year ended 31 December**	
	2014	**2013**
Discontinued operations		
Revenues	2,095	1,731
Expenses	(1,710)	(1,804)
Other income	57	-
Operating profit	**442**	**(73)**
Income tax expense	-	-
Profit for the period	**442**	**(73)**

10.1 Assets held for disposal

in Euro x 1,000	**As at 31 December**	
	2014	**2013**
Assets		
Property, plant and equipment	1	-
Intangible assets	0	-
Inventory	416	-
Trade and other receivables	3	-
Total assets	**419**	**-**

10.2 Liabilities of disposal group classified as held for sale

in Euro x 1,000	**As at 31 December**	
	2014	**2013**
Liabilities		
Trade and other payables	(83)	-
Other current liabilities	-	-
Provisions	21	-
Total liabilities	**(62)**	**-**

10.3 Cash flows

in Euro x 1,000	**Year ended 31 December**	
	2014	**2013**
Cash flows from operating activities		
Profit for the year from discontinued operations	442	(73)
Adjustments for:		
- Depreciation	1	1
- Amortization	121	442
- Changes in provisions	6	7
- Finance costs - net	(19)	47
Changes in working capital (excluding exchange differences on consolidation)		
- Inventories	(33)	(95)
- Trade and other receivables	380	(378)
- Trade and other payables	(152)	13
Net cash generated from operating activities	**745**	**(37)**
Cash flows from financing activities		
Effect of exchange rate changes	21	-
Change in cash from discontinued operations	**767**	**(37)**

11 Share capital and other reserves

11.1 Ordinary shares

The authorized share capital amounts to Euro 2,000,000 consisting of 200,000,000 ordinary shares, with a nominal value of Euro 0.01 each. The issued share capital at 31 December 2014 comprises of 131,866,911 ordinary shares (2013: 92,589,875). In 2014 144,000 options were exercised by employees and 39,474 employee shares were re-purchased. All 131,866,911 shares issued are fully paid and 412 shares remain in treasury.

In 2014 Euro 38.2 million was received from issuance of ordinary shares comprising of:

- Euro 26 million of new funding in May 2014
- Minus Euro 0.2 million of costs
- Euro 10.0 million from the subordinated loan from existing shareholders that converted in May 2014
- Euro 1.1 million of accrued interest on the convertible loan (Euro 669,000 in 2013 and Euro 469,000 in 2014)
- And Euro 1.3 million of additional new funding in December 2014

11.2 Other reserves

The costs of equity settled share-based payments to employees are recognized in the statement of comprehensive income, together with a corresponding increase in equity during the vesting period, taking into account (deferral of) corporate income taxes. The accumulated expense of the share incentive plan recognized in the statement of comprehensive income is shown as a total of the equity category “other reserves” in the “consolidated statement of changes in equity”.

11.3 Currency translation difference

The group does not hold a company reporting in any other currency than Euro and therefore does not hold a currency translation reserve.

12 Share-based payment

The company operates a share-based payment plan for its employees. This Avantium Option Plan, which was adopted in 2006, is classified as an equity-settled share option plan. Each option relates to one share. Eligible employees are offered options to purchase depositary receipts of ordinary shares in the company. The depositary receipts acquired upon exercise of options granted under the equity-settled Avantium Option Plan are blocked (i.e. may not be transferred, sold, assigned, charged, pledged or encumbered during a vesting period of three years) as follows: 33% of the depositary receipts will be unblocked following the first anniversary of the date of grant of the relevant options, an additional 33% of the depositary receipts will be unblocked following the second anniversary of the date of grant of the relevant options and the remaining 34% of the depositary receipts will be unblocked following the third anniversary of the date of grant of the relevant options. Granted options have a duration of 10 years.

In 2014 overall 1,185,981 (2013: 270,000) share options were granted to key employees of the group. 1,167,450 options were granted with an exercise price of Euro 0.01 per option, 200,000 with an exercise price of Euro 0.98 and as an employee left the group 181,469 options were returned of which 115,669 had an exercise price of Euro 0.76 and 65,770 an exercise price of Euro 0.01.

In 2014 144,000 options were exercised by employees with an exercise price of Euro 0.01 per option. 39,474 employee shares were re-purchased at the exercise price of Euro 0.76 per share.

The movements in outstanding options with the executive board, senior management and certain other employees can be summarized as follows:

	2014		2013	
	Number	Average exercise price (in Euro)	Number	Average exercise (in Euro)
Number of options outstanding 1 January	**7,455,171**	**0.06**	**7,185,171**	**0.06**
Number of options granted	1,185,981	0.10	270,000	0.01
Number of options exercized	(104,526)	(0.27)	-	-
Number of options forfeited	-	-	-	-
Number of options expired	-	-	-	-
Number of options outstanding 31 December	**8,536,626**	**0.07**	**7,455,171**	**0.06**

Avantium Holding B.V. has issued shares resulting from the exercise of options to the “Stichting Administratiekantoor Avantium’’ (the “Foundation”).

The Foundation has issued depository receipts to members of the Executive Board, senior management and certain other employees. The Foundation is a consolidated special purpose entity by Avantium Holding B.V., however the shares held by the Foundation only represent the voting rights associated with the issued shares and depository receipts representing all economic benefits are issued by the Foundation to members of the Executive Board, senior management and certain other employees and consequently the shares held by the Foundation are not considered treasury shares.

Share options outstanding at the end of the year have the following expiry date and exercise price:

Expiry date	Exercise price in Euro per option	Options 2014	Options 2013
19 October 2016	0.76	253,448	328,917
11 May 2017	0.76	135,494	136,250
1 October 2018	0.01	505,414	546,184
1 May 2019	0.01	701,911	701,911
1 May 2020	0.01	607,409	632,409
4 November 2020	0.01	769,000	769,000
30 November 2021	0.01	3,394,700	3,408,700
16 April 2022	0.01	100,000	145,000
14 December 2022	0.01	460,800	516,800
19 April 2023	0.01	235,000	240,000
20 August 2023	0.01	30,000	30,000
6 March 2024	0.01	643,450	-
1 September 2024	0.01	500,000	-
1 September 2024	0.98	200,000	-
	0.07	**8,536,626**	**7,455,171**

All outstanding options are exercisable but still restricted by the vesting period. The fair value of options under the equity-settled Avantium Option Plan is determined using the Binomial option valuation model and the weighted average fair value of options granted during 2014 was Euro 0.94 per option (2013: Euro 1.45).

The significant inputs into this model were as follows:

	Sep-14	Mar-14	Aug-13	Apr-13
Input price	0.98	0.98	1.52	1.45
Volatility	88%	86%	88%	90%
Risk free interest rate	0.20%	0.89%	1.14%	0.62%
Dividend yield	-	-	-	-
Maturity	10 years	10 years	10 years	10 years
Early exercise rate	5%	5%	5%	5%

The historical volatility used is based on the daily stock returns from a comparable listed company over a period equal to the maturities of each plan related to the valuation dates.

A total share-based payment expense amounting Euro 935,000 has been recognized in the statement of comprehensive income for 2014 (2013: 1,192,000) based on the calculated fair value of the share options granted in 2014, 2013, 2012 and 2011 and their vesting periods. The adjustment to equity when recognizing an expense for the equity-settled Avantium Option Plan is recorded within 'other reserves'.

13 Trade and other payables

(In Euro x 1,000)	2014	2013
Trade payables	2,292	3,290
Social security and other taxes	323	308
Holiday pay and holiday days	499	485
Other current liabilities	4,357	3,914
	7,472	**7,997**

The other current liabilities comprises of the operating lease commitment of rent, accrued expenses and pension costs.

14 Borrowings

The carrying amounts of the group's borrowings are denominated in Euro.

Non-current		
(In Euro x 1,000)	**2014**	**2013**
Innovation loan	3,865	3,996
Finance lease liabilities	0	5
	3,866	**4,001**
Current		
(In Euro x 1,000)	**2014**	**2013**
Bank overdrafts	-	-
Convertible bond	-	10,669
Loan Witte Zwaan Holding B.V.	1,650	1,650
Innovation loan	378	-
Finance lease liabilities	5	5
	2,033	**12,324**
Total borrowings	**5,898**	**16,325**

(a) Innovation loan

On 28 October 2010 Rijksdienst Voor Ondernemend Nederland (RVO) granted the group a Euro 4 million Innovation Loan facility, to be paid back between 2015 and 2020. The group started drawing the loan facility in 2012 and the current draw down is Euro 3,777,000. This loan has a fixed interest rate of 6.2% per annum and the accumulated interest is Euro 466,000 (Euro 26,000 for 2012, Euro 193,000 for 2013 and Euro 247,000 for 2014). Contractually in 2015 a first term of 10% of the drawn amount has to be paid back. Pledged to RVO are all assets financed by this Innovation Loan facility and the group used it to finance part of the YXY Pilot Plant assets.

(b) Loan Witte Zwaan Holding B.V.

In 2012 the group sold the Profit Participating Loan (PPL) of Euro 1,650,000 for one Euro to Witte Zwaan Holding B.V. which has been recorded as part of 'other losses'. The loan is not interest bearing and will be repaid within one year as part of dissolving the Zwarte Zwaan Holding B.V.

(c) Bank overdrafts

At the end of 2013, the group has a banking facility with the ABN AMRO Bank of Euro 2.0 million with an interest rate determined on the basis of the average one-month EURIBOR +1,75% per annum. Also refer to note 23 p. [•]. At 31 December 2014 the group had not drawn down any amounts under this facility.

(d) Convertible bond

In January 2013 the existing shareholders committed to a 1% per month subordinated convertible bond of Euro 10 million which was fully drawn down in 2013. This bond and Euro 1.1 million accrued interest converted to equity in 2014.

(e) Finance lease liabilities

The group leases certain enterprise software by means of finance leases, also refer to note 5.

(In Euro x 1,000)	**2014**	**2013**
Gross finance lease liabilities – minimum lease payments:		
No later than 1 year	5	4
Later than 1 year and no later than 5 years	0	5
Later than 5 years	-	-
	5	**9**
Future finance charges on finance leases	(1)	(1)
Present value of finance lease liabilities	**5**	**8**

The present value of finance lease liabilities is as follows:

The present value of finance lease liabilities is as follows:		
No later than 1 year	5	4
Later than 1 year and no later than 5 years	0	4
Later than 5 years	-	-
	5	**8**

15 Provisions for other liabilities and charges

(In Euro x 1,000)	**Decommissioning Liability**	**Warranty provision**	**Total**
At January 1, 2013	245	95	340
Additional provision	-	172	172
Unwinding of discount	10	-	10
Unused amounts reversed	-	(63)	(63)
Used during the year	-	(11)	(11)
At December 31, 2013	**256**	**193**	**449**
At January 1, 2014	**256**	**193**	**449**
Additional provision	-	143	143
Unwinding of discount	10	-	10
Unused amounts reversed	-	(21)	(21)
Used during the year	-	(31)	(31)
Transferred to disposal group classified as held for sale	-	(21)	(21)
At December 31, 2014	**266**	**264**	**530**

The provisions relate to the decommissioning liability for restoring leased property into its original condition and to warranty costs for delivered systems.

(a) Decommissioning liability

In February 2007 the company signed a lease agreement for its facilities in Amsterdam at the Zekeringstraat 29 and 31. The term of this agreement is 10 years with options to extend. The term includes also a provision to return the building into its original condition. Therefore a decommissioning liability is recognized. The estimate for the decommissioning liability is based on an estimated number of hours and hourly rate, based on historical experience and external costs using an interest percentage of 5%. The company is reasonable certain that the option to extend for 10 years will be used. Therefore the present value of the decommissioning liability is calculated based on the assumption that the costs will occur after 20 years.

(b) Warranty

The provision for warranty consists of estimated costs for repairs of installed products during the warranty period of one year. This estimate is based on historical experience of broken or repaired units and the costs associated with that. This provision is current (shorter than 1 year). Unused amounts are reversed after expiration of the warranty period.

16 Revenues

As we sold Avantium Pharmatech B.V. on 8 January 2015, for 2014 we report result of the Pharma systems business as a Euro 442,000 profit (2013: Euro 73,000 loss) for the year from discontinued operations. The financials like revenue and cost of sales exclude the Pharma systems business.

Revenues decreased for the YXY development program and the Catalysis business and increased for Pharma Systems, where the majority of revenue was attributable to the Catalysis business. Reported consolidated revenue decreased with 21% from Euro 13.1 million in 2013 to Euro 10.3 million in 2014, all recognized using the POC method, refer to note 2.21 p. [•]. Operating expenses increased from Euro 23.3 million to Euro 24.5 million, predominantly driven by YXY's Euro 1.3 million higher purification and polymerization costs linked to a higher production volume.

17 Expenses by nature

Overall operational costs are Euro 1,183,000 higher in 2014 (Euro 24,526,000) compared to 2013 (Euro 23,343,000). This increase is driven by Euro 1,330,000 higher cost of goods sold, being costs made at toll manufacturers.

(In Euro x 1,000)	**2014**	**2013**
Cost of sales	9,687	8,958
Selling and marketing costs	2,156	2,030
Research and development	9,744	8,807
General and administrative costs	2,938	3,548
	24,526	**23,343**

Cost of sales in 2014 amounts to Euro 9,687,000 (2013: 8,958,000) and besides COGS comprises of cost of goods sold, allocated employee costs, depreciation costs of intangible and tangible assets related to revenues, costs of laboratory consumables and specific costs related to revenues.

Selling and marketing costs in 2014 amount to Euro 2,156,000 (2013: 2,030,000) and comprise of allocated employee costs, travel costs and sales and marketing costs.

Research and development costs in 2014 amount to Euro 9,744,000 (2013: 8,807,000) and comprise of allocated employee costs offset by subsidies, depreciation and amortization costs of intangible and tangible assets not related to revenues and specific purchases not related to revenues. The increase was driven by higher depreciation costs for the pilot plant. A higher average headcount was offset by a Euro 0.8 million higher amount of subsidies recognized. The group recognized total government grants of Euro 1,694,000 (2013: Euro 813,000) to contribute to the Avantium development program in New Chemistries where efforts are focused on developing a new catalytic process for making biobased ethylene-glycol and on developing an economical viable chemical process to convert lingo-cellulosic biomass into high quality glucose as feedstock for biobased chemicals. Also see note 2.22 p. [•].

General and administrative costs in 2014 amount to Euro 2,938,000 (2013: 3,548,000) and comprise of corporate and patent costs, facility and office costs and allocated employee costs. The higher costs in 2013 were driven by the impairment of an earn-out.

(In Euro x 1,000)		**2014**	**2013**
Employee benefit expenses	(note 18)	9,825	9,766
Depreciation, amortization and impairment charge	(note 5, 6)	2,187	2,089
Office and housing expenses		1,698	1,833
Patent, license, legal and advisory expenses		1,520	1,822
Laboratory expenses		2,224	1,872
Sales and marketing expenses		1,068	882
Cost of goods sold		5,215	3,884
Other operating expenses		790	1,194
		24,526	**23,343**

Patent, license, legal and advisory costs include fees for food contact studies and regulatory filings. Other operating expenses include financial statements audit fees, refer to note 33 for details.

18 Employee benefits

(In Euro x 1,000)	**2014**	**2013**
Wages and salaries	7,212	7,187
Social security costs	1,202	1,176
Share options granted to directors and employees (note	935	935
Pension costs – defined contribution plans	476	469
	9,825	**9,766**
Number of full time equivalent employees at December 31	**128.6**	**123.1**

The average FTE during 2014 amounts to 125.3 (2013: 114.3).

The group received government grants in 2014 and 2013. In 2014 Euro 779,000 (2013: 598,000) government grants were recognized relating to research and development ("WBSO") and Euro 1,694,000 (2013: 813,000) for other specific development projects related to development programs which were deducted from the employee benefits.

19 Finance income and costs

(In Euro x 1,000)	**2014**	**2013**
Finance costs:		
- Innovation loan	(247)	(193)
- Convertible bond	(469)	(669)
- Settlement loan Crystallics	-	-
- Provisions: unwinding of discount (note 15)	(10)	(10)
- Finance lease liabilities	(1)	(1)
- Net foreign exchange gains (loss)	40	6
- Interest current accounts	(159)	(115)
Finance costs	**(845)**	**(981)**
Finance income:		
- Interest current accounts	268	202
- Interest loan to Crystallics	-	-
Finance income	**268**	**202**
Finance costs - net	**(577)**	**(779)**

The Finance costs for the Innovation loan are non-cash; interest is added to the principal amount of the loans. Also refer to note 14 p. [•].

20 Income tax expense

No tax charges or tax income have been recognized in 2014 since the company is in a loss making position and no deferred tax asset has been recognized for carry forward losses. The loss in 2014 is mainly driven by significant investments in the product development programs and the pilot plant. As a result of the significant investment in our product development programs we do not expect any taxable income in the following year.

The company forms an income tax group with its subsidiaries, except for Avantium Knowledge Centre B.V. Under the standard conditions, the members of the tax group are jointly and severally liable for any taxes payable by the group.

Tax loss carry-forward is subject to a time limitation of nine years. In 2011 we have completed a fiscally approved transaction that decreased but at the same time extended a significant part of our losses carried forward. Fiscally IP was valued, annually being amortized over 10 years and ensuring the carry forward losses will increase again. The total amount of tax losses carried forward as of 31 December 2014 is estimated at Euro 67,160,000 and in 2023 a first part (the loss of 2012) will expire.

	2014	2013
(In Euro x 1,000)		
Current tax	-	-
Deferred tax	-	-
	-	-
Loss before tax	(14,356)	(11,125)
Temporary differences	-	-
Expenses not deductible for tax purposes	-	-
Tax losses for which no deferred income tax asset was recognized	(14,356)	(11,125)
Tax charge	-	-

The nominal tax rates and amounts in 2014 are 20% up to Euro 200,000 and 25% over Euro 200,000.

21 Dividends

The company declared no dividends for any of the years presented in these consolidated financial statements.

22 Cash flow statement

In the cash flow statement, purchases of property, plant and equipment comprise:

(In Euro x 1,000)	**2014**	**2013**
Additions according to note 5	1,635	1,960
Purchases of property, plant and equipment	**1,635**	**1,960**

23 Contingencies

On behalf of the group ABN AMRO Bank has issued a bank guarantee for a total amount of Euro 241,000 that covers the operating lease commitment to rent the site at the Zekeringstraat 29 – 31 for three months and decommissioning of the corridor between Penta1 en Penta2.

For our Euro 2 million credit facility, assets of the following legal entities, excluding the intangible assets and the finance lease assets are pledged to the ABN AMRO Bank:

- Avantium Holding B.V.
- Avantium Technologies B.V.

− Avantium Support B.V.
− Avantium Cleantech B.V.
− Avantium Chemicals B.V.

The consolidated balance sheets of these entities form the credit base and the credit agreement requires a solvability ratio above 35%. The solvability ratio of the credit base was 61% on 31 December 2014.

24 Commitments

Operating lease commitments

The operating lease commitments comprises to a lease contract to rent the site at the Zekeringstraat 29 – 31 for a remaining Euro 1.7 million and a lease contract for the pilot plant in Geleen for a remaining Euro 115,000. The contract of the Zekeringstraat 29 – 31 expires in 2017 and the group has an option to extend this period with two additional periods of 5 years. The contract of the pilot plant in Geleen expires in November 2015 and the group has an option to extend with one year. Also refer to note 26 p. [•].

The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

(In Euro x 1,000)	**2014**	**2013**
No later than 1 year	840	827
Later than 1 year and no later than 5 years	809	1,764
Later than 5 years	-	-
	1,648	**2,591**

25 Related-party transactions

The following transactions were carried out with related parties:

a) Key management compensation

Key management is defined as those persons having legal authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity. Our key management comprises the members of the Executive Board and the Supervisory Board.

The following persons are members of the Executive Board at December 31, 2014:

- Tom van Aken, Chief Executive Officer
- Frank Roerink, Chief Financial Officer

The following persons are members of the Supervisory Board at December 31, 2014:

- Jan van der Eijk, chairman
- Michiel de Haan, vice chairman
- Claude Stoufs
- Denis Lucquin
- Jonathan Wolfson

The total remuneration paid to or for the benefit of members of the Supervisory Board and of the Executive Board in 2014 amounted to Euro 189,000 and Euro 654,000 respectively. The following table provides the breakdown in the remuneration in 2014 of the members of the Executive Board and Supervisory Board:

2014 *(In Euro x 1,000)*	**Salary**	**Bonus**	**Share-based payments**	**Post-employee benefits**	**2014 Total**
Supervisory board	100	-	89	-	189
Executive board	423	85	126	21	654
	523	**85**	**214**	**21**	**843**

2013 *(In Euro x 1,000)*	**Salary**	**Bonus**	**Share-based payments**	**Post-employee benefits**	**2013 Total**
Supervisory board	50	-	137	-	187
Executive board	389	97	340	21	847
	439	**97**	**477**	**21**	**1,034**

b) Shares and share options held by key management

The Executive Board currently holds 336,500 shares, the Supervisory nil. The following table provides information on their share options:

Executive Board

Share Options	2014 Number	Exercise price (in	2013 Number	Exercise price (in
Number of options outstanding 1 January	**4,456,046**	**0.06**	**4,456,046**	**0.06**
Number of options granted	-	-	-	-
Number of options exercized	-	-	-	-
Number of options forfeited	-	-	-	-
Number expired	-	-	-	-
Number of options outstanding 31 December	**4,456,046**	**0.06**	**4,456,046**	**0.06**

In 2014 no additional share options were granted to the Executive Board. The share-based payment to the Executive board of Euro 126,000 comprises of the part of the share-based compensation (note 12 p. [•]) contributable to the share options granted in previous years.

Supervisory Board

Share Options	2013 Number	Exercise price (in Euro)	2013 Number	Exercise price (in Euro)
Number of options outstanding 1 January	**200,000**	**0.01**	**100000**	**0.01**
Number of options granted	-	-	100,000	0.01
Number of options exercized	-	-	-	-
Number of options forfeited	-	-	-	-
Number expired	-	-	-	-
Number of options outstanding 31 December	**200,000**	**0.01**	**200,000**	**0.01**

There are no related party transactions which would need to be disclosed other than those described above.

26 Events after the balance sheet date

On 8 January 2015 Zwarte Zwaan Holding B.V. ceased to have control over Avantium Pharmatech B.V. as 100% of the shares of Avantium Pharmatech B.V. were sold to the Technobis Group B.V. with effective date 31 December 2014. Subsequently, the group aims to dissolve Zwarte Zwaan Holding B.V. in the first half of 2015 and to pay the proceeds from this transaction to the specific group of shareholders of Zwarte Zwaan B.V. as disclosed in note 2.2 p. [•].

In February 2015 the group extended the lease contract to rent the site at the Zekeringstraat 29 – 31 until 2027. This results in a Euro 9.4 million commitment until the second quarter of 2027.

INDEPENDENT AUDITOR'S REPORT

To: the general meeting of Avantium Holding B.V.

Report on the financial statements 2014

We have audited the accompanying financial statements 2014 of Avantium Holding B.V., Amsterdam. The financial statements include the consolidated financial statements and the company financial statements. The consolidated financial statements comprise the consolidated balance sheet as at 31 December 2014, the consolidated statement of comprehensive income, changes in equity and cash flows for the year then ended and the notes, comprising a summary of significant accounting policies and other explanatory information. The company financial statements comprise the company balance sheet as at 31 December 2014, the company income statement for the year then ended and the notes, comprising a summary of accounting policies and other explanatory information.

Management board's responsibility

The management board is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code, and for the preparation of the management board report in accordance with Part 9 of Book 2 of the Dutch Civil Code. Furthermore, the management board is responsible for such internal control as it determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the company's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the management board, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion with respect to the consolidated financial statements

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Avantium Holding B.V. as at 31 December 2014, and of its result and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the company financial statements

In our opinion, the company financial statements give a true and fair view of the financial position of Avantium Holding B.V. as at 31 December 2014, and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements

Pursuant to the legal requirement under Section 2: 393 sub 5 at e and f of the Dutch Civil Code, we have no deficiencies to report as a result of our examination whether the management board report, to the extent we can assess, has been prepared in accordance with Part 9 of Book 2 of this Code, and whether the information as required under Section 2: 392 sub 1 at b-h has been annexed.

Further we report that the management board report, to the extent we can assess, is consistent with the financial statements as required by Section 2: 391 sub 4 of the Dutch Civil Code.

Amsterdam, 14 April 2015

PricewaterhouseCoopers Accountants N.V.

Original has been signed by J. van Meijel RA

The above auditor's report is the original auditor's report that was issued on 14 April 2015 with respect to the financial statements for the period ending 31 December 2014. These financial statements also contained the report of the Executive and Supervisory board. For purposes of the Prospectus the report of the Executive and Supervisory board has been omitted.

CONSOLIDATED FINANCIAL INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2013

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

in Euro x 1,000		Year ended 31 December	
	Notes	2013	2012
Continuing operations			
Revenues	15	14,800	15,291
Cost of sales	16	(10,092)	(9,010)
Gross profit		**4,709**	**6,281**
Selling and marketing costs	16	(2,093)	(2,453)
Research and development costs	16	(9,430)	(9,260)
General and administrative costs	16	(3,486)	(3,329)
Other losses	13	-	(1,650)
Operating loss		**(10,301)**	**(10,412)**
Finance income	18	203	187
Finance costs	18	(1,028)	(209)
Finance costs - net		**(825)**	**(22)**
Loss before income tax		**(11,125)**	**(10,433)**
Income tax expense	19	-	-
Loss for the year from continuing operations		**(11,125)**	**(10,433)**
Other comprehensive income:			
Currency translation differences	10	-	(72)
Currency translation on closing Avantium Technologies Inc.	10	-	72
Other comprehensive income for the year, net of tax		-	-
Total comprehensive income for the year		**(11,125)**	**(10,433)**
Result attributable to:			
Owners of the parent		(11,053)	(10,393)
Non-controlling interests		(73)	(40)
		(11,125)	**(10,433)**
Total comprehensive income attributable to:			
Owners of the parent		(11,053)	(10,393)
Non-controlling interests		(73)	(40)
		(11,125)	**(10,433)**

The notes on pages [•] 13-46 are an integral part of these consolidated financial statements.

CONSOLIDATED BALANCE SHEET

in Euro x 1,000	Notes	As at 31 December 2013	2012
Assets			
Non-current assets			
Property, plant and equipment	5	9,606	9,697
Intangible assets	6	292	797
		9,898	10,494
Current assets			
Inventories	7	1,309	910
Trade and other receivables	8	4,917	3,831
Cash and cash equivalents (excluding bank overdrafts)	9	5,425	3,904
		11,652	8,645
Total assets		**21,550**	**19,139**
Equity and liabilities			
Equity attributable to owners of the parent			
Ordinary shares	10	927	927
Share premium	10,11	43,491	43,491
Other reserves	10,11	4,272	3,080
Retained earnings		(51,986)	(40,934)
		(3,296)	6,564
Non-controlling interests		75	148
Total equity		**(3,221)**	**6,712**
Liabilities			
Non-current liabilities			
Borrowings	13	5,651	4,231
Provisions for other liabilities and charges	14	256	245
		5,907	**4,476**
Current liabilities			
Borrowings	13	10,674	-
Trade and other payables	12	7,997	7,856
Provisions for other liabilities and charges	14	193	95
		18,864	**7,951**
Total liabilities		**24,771**	**12,427**
Total equity and liabilities		**21,550**	**19,139**

The notes on pages [•] 13-46 are an integral part of these consolidated financial statements.

The financial statements on pages [•] 13-46 are authorized for issue by the board of directors on 22 May 2014.

T.B. van Aken
Chief Executive Officer

F.C.H. Roerink
Chief Financial Officer

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

in Euro x 1,000

	Notes	Attributable to equity holders of the company: Ordinary share capital	Share premium reserve	Other reserves	Retained earnings	Total	Non-controlling interest	Total equity
Balance at 1 January 2012		**926**	**43,491**	**1,810**	**(30,612)**	**15,615**	**187**	**15,802**
Comprehensive income								
Result for the year		-	-	-	(10,393)	(10,393)	(40)	(10,433)
Other Comprehensive income for the year								
Currency translation differences	10	-	-	(72)	-	(72)	-	(72)
Total other comprehensive		-	-	-	72	72	-	72
Total Comprehensive income		-	-	**(72)**	**(10,321)**	**(10,393)**	**(40)**	**(10,433)**
Transactions with owners								
- Value of employee services	11	-	-	1,342	-	1,342	-	1,342
- Issue of ordinary shares	10	2	-	-	-	2	-	2
- Sale of interest to non-controlling interest in Zwarte Zwaan Holding B.V.	28	(1)	-	-	-	(1)	1	-
Total transactions with owners		**1**	**-**	**1,342**	**-**	**1,343**	**1**	**1,344**
Balance at 31 December 2012		**927**	**43,491**	**3,080**	**(40,934)**	**6,564**	**148**	**6,712**
Balance at 1 January 2013		927	43,491	3,080	(40,934)	6,564	148	6,712
Comprehensive income								
Result for the year		-	-	-	(11,053)	(11,053)	(73)	(11,125)
Other Comprehensive income								
Total Comprehensive income for the year		**-**	**-**	**-**	**(11,053)**	**(11,053)**	**(73)**	**(11,125)**
Transactions with owners								
- Value of employee services	11	-	-	1,192	-	1,192	-	1,192
Total transactions with owners		**-**	**-**	**1,192**	**-**	**1,192**	**-**	**1,192**
Balance at 31 December 2013		**927**	**43,491**	**4,272**	**(51,986)**	**(3,296)**	**75**	**(3,221)**

The notes on pages [•] 13-46 are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

in Euro x 1,000		Year ended 31 December	
	Notes	**2013**	**2012**
Cash flows from operating activities			
Loss for the year from continuing operations		(11,125)	(10,433)
Adjustments for:			
- Depreciation	5	1,952	1,520
- Amortization	6	421	545
- Impairment	6	172	-
- Share-based payment	11	1,192	1,342
- Changes in provisions	14	109	19
- Finance costs - net	18	825	22
- Other losses	13	-	1,650
Changes in working capital (excluding exchange differences			
- Inventories	7	(399)	(261)
- Trade and other receivables	8	(1,087)	110
- Trade and other payables	12	141	2,409
Cash generated from operations		(7,800)	(3,078)
Interest paid	18	(115)	(209)
Net cash generated from operating activities		(7,915)	(3,287)
Cash flows from investing activities			
Purchases of property, plant and equipment (PPE)	5	(1,960)	(3,001)
Purchases of intangible assets excluding financial lease	6	(26)	(40)
Net cash used in investing activities		(1,986)	(3,042)
Cash flow from financing activities			
Proceeds from issuance of ordinary shares	10	-	2
Sale of interest in non-controlling interest	28	-	1
Interest received	18	203	187
Innovation loan	13	1,222	2,581
Convertible bond	13	10,000	-
Repayments of borrowings	13	(5)	(45)
Net cash generated from financing activities		11,421	2,726
Net (decrease)/ increase in cash, cash equivalents		**1,520**	**(3,603)**
Cash, cash equivalents and bank overdrafts at beginning of	9	3,904	7,507
Effect of exchange rate changes	18	2	-
Cash and cash equivalents at end of year		**5,425**	**3,904**

The notes on pages [•] 13-46 are an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1 General information

Avantium Holding B.V. ('the company') and its subsidiaries (together 'the group' develop and commercialize next generation bio-based plastics and chemicals based on our unique technological capabilities in advanced catalysis research & development. Over the years our company has established a leading market position in providing advanced catalysis services and systems. The group operates a pilot plant in Geleen, The Netherlands to further develop, test and prove its YXY technology. The company has its statutory seat at the Zekeringstraat 29-31, 1014 BV in Amsterdam, The Netherlands.

These consolidated financial statements are approved for issue by both the Supervisory Board and the Executive Board on 22 May 2014.

2 Summary of significant accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

2.1 Basis of preparation

The consolidated financial statements of Avantium Holding B.V. have been prepared in accordance with International Financial Reporting Standards (IFRS) and IFRS Interpretations Committee (IFRS IC) applicable to companies reporting under IFRS. The consolidated financial statements have been prepared under the historical cost convention.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in note 4 p. [•].

2.1.1 Going concern

The net loss for the year 2013 amounts to Euro 11,125,000, and in anticipation of the Annual Meeting's adoption of the annual accounts, this has been added to the accumulated deficit resulting in a negative equity of Euro 3.3 million. In 2013 the negative equity has been compensated through a subordinated convertible loan from existing shareholders of Euro 10.0 million. The book value of the subordinated convertible loan including interest is Euro 10.7 million as at 31 December 2013. As a result the company has at year end a positive guarantee capital of Euro 7.4 million, also refer to note 3.2 p. [•].

The cash position at year end 2013 increased from Euro 3.9 million to Euro 5.4 million as a result of drawing down the subordinated convertible loan of Euro 10 million from the existing shareholders. The company did not make use of the credit facility of Euro 2.0 million with ABN AMRO Bank. The company complies at year end with the solvability ratio as agreed with ABN AMRO Bank, also refer to note 22 p. [•].

In May 2014, the group raised new funding of Euro 26 million from our existing shareholders, from our development partners The Coca Cola Company, Danone and Alpla and from Swire Pacific Ltd. On 22 May 2014 all investors signed the investment documentation. The committed investments will be received ultimately 28 May 2014. Furthermore the Euro 10.0 million subordinated convertible loan from existing shareholders plus Euro 1.2 million of accrued interest (Euro 0.7 million in 2013 and Euro 0.5 million in 2014) has been converted into equity ultimately on 22 May 2014. As a consequence of new funding activities in 2013 and 2014 net equity will increase in May 2014 with approximately Euro 37 million.

Also for 2014 the group anticipates on a net loss including negative operating cash flows. This loss will be funded by the new committed cash of Euro 26 million in May 2014. As a consequence of the new funding activities in 2013 and 2014 net equity will increase with approximately 37 million in May 2014.

As a result of the funding activities undertaken and strict working capital management the group has maintained its short-term and medium-term liquidity position. We believe that the anticipated cash flows of our services and systems business and new funding activities closed finalised in 2014 are sufficient to meet the requirements for working capital, capital expenditures and R&D for at least the next twelve months from the date of this report. The group therefore continues to adopt the going concern basis in preparing its consolidated financial statements.

2.1.2 Changes in accounting policy and disclosures

(a) New and amended standards adopted by the group

The following standards have been adopted by the group for the first time for the financial year beginning on or after 1 January 2013 and have a material impact on the group:

- Amendment to IAS 1, 'Financial statement presentation' regarding other comprehensive income became effective in 2012 and did not lead to any changes in the financial statements presentation of the group. The main change resulting from these amendments is a requirement for entities to group items presented in 'other comprehensive income' (OCI) on the basis of whether they are potentially reclassifiable to profit or loss subsequently (reclassification adjustments).

- IAS 19, ‘Employee benefits’ was revised in June 2011 and did not lead to any changes in the financial statements presentation of the group. The group operates a defined contribution pension plan for all employees funded through payments to an insurance company. The group has no legal or constructive obligations to pay further contributions if the plan does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods.
- IFRS 10, ‘Consolidated financial statements’ builds on existing principles by identifying the concept of control as the determining factor in whether an entity should be included within the consolidated financial statements of the parent company. The standard (effective for annual periods starting January 1, 2013) provides additional guidance to assist in the determination of control where this is difficult to assess and did not lead to any changes in the financial statements presentation of the group.
- IFRS 11, ‘Joint arrangements’, effective for annual periods starting January 1, 2013, focuses on the rights and obligations of the parties to the arrangement rather than its legal form. There are two types of joint arrangements: joint operations and joint ventures. Joint operations arise where the investors have rights to the assets and obligations for the liabilities of an arrangement. A joint operator accounts for its share of the assets, liabilities, revenue and expenses. Joint ventures arise where the investors have rights to the net assets of the arrangement; joint ventures are accounted for under the equity method. Proportional consolidation of joint arrangements is no longer permitted. IFRS 11 does not lead to any changes in the financial statements presentation.
- IFRS 12, ‘Disclosures of interests in other entities’ includes the disclosure requirements for all forms of interests in other entities, including joint arrangements, associates, structured entities and other off balance sheet vehicles (effective for annual periods starting January 1, 2013). It did not lead to any changes in the financial statements presentation of the group.
- IFRS 13, ‘Fair value measurement’, effective for annual periods starting January 1, 2013, aims to improve consistency and reduce complexity by providing a precise definition of fair value and a single source of fair value measurement and disclosure requirements for use across IFRSs. It did not lead to any changes in the financial statements presentation of the group. The requirements, which are largely aligned between IFRSs and US GAAP, do not extend the use of fair value accounting but provide guidance on how it should be applied where its use is already required or permitted by other standards within IFRSs.
- Amendments to IAS 36, ‘Impairment of assets’, on the recoverable amount disclosures for non-financial assets. This amendment removed certain disclosures of the recoverable amount of CGUs which had been included in IAS 36 by the issue of IFRS 13. The amendment is not mandatory for the group until 1 January 2014, however the group has decided to early adopt the amendment as of 1 January 2013 not leading to any changes in the financial statements.

(b) New standards and interpretations not yet adopted

A number of new standards and amendments to standards and interpretations are effective for annual periods beginning after 1 January 2013, and have not been applied in preparing these consolidated financial statements. None of these is expected to have a significant effect on the consolidated financial statements of the group, except the following set out below:

- IFRIC 21, ‘Levies’, sets out the accounting for an obligation to pay a levy that is not income tax and is effective from 1 January 2014. The interpretation addresses what the obligating event is that gives rise to pay a levy and when should a liability be recognized. The group is not currently subjected to significant levies so the impact on the group is not material.

There are no other IFRSs or IFRIC interpretations that are not yet effective that would be expected to have a material impact on the group.

2.2 Consolidation

(a) Subsidiaries

Subsidiaries are all entities over which the group has control. The group controls an entity when the group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the group. They are deconsolidated from the date that control ceases.

The group applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The group recognizes any non-controlling interest in the acquiree on an acquisition- by-acquisition basis, either at fair value or at the non-controlling interest’s proportionate share of the recognized amounts of acquiree’s identifiable net assets. Acquisition-related costs are expensed as incurred.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer’s previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measurement are recognized in profit or loss. Any contingent consideration to be transferred by the group is recognized at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognized in accordance with IAS 39 either in profit or loss or as a change to other comprehensive income. Contingent consideration that is classified as equity is not re-measured, and its subsequent settlement is accounted for within equity.

The consolidated companies are listed below:

- Avantium Technologies B.V., Amsterdam (100%);
- Avantium Support B.V., Amsterdam (100%);
- Avantium Pharmatech B.V., Amsterdam (100%);
- Avantium Cleantech B.V., Amsterdam (100%);
- Avantium Chemicals B.V., Amsterdam (100%);
- Avantium Knowledge Centre B.V., Amsterdam (100%)
- Furanix Technologies B.V., Amsterdam (100%);
- YXY Technologies B.V., Amsterdam (100%);
- Stichting Administratiekantoor Avantium, Amsterdam (100%);
- Stichting Stock Options Avantium, Amsterdam (100%);
- Zwarte Zwaan Holding B.V., Amsterdam (95%).

On 24 January 2012, the group sold 5% of the shares of Zwarte Zwaan Holding B.V. to Witte Zwaan Holding B.V., a legal entity not part of the group. As per the shareholder investment agreement signed on 19 May 2011, the result of the 95% subsidiary Zwarte Zwaan Holding B.V. is not distributed to all shareholders but only to a specific group of shareholders participating in Witte Zwaan Holding B.V. As equity is not attributable to the group we present the equity and result of Zwarte Zwaan B.V. as "non-controlling interest".

In 2012 the group dissolved the Avantium Technologies Inc. with statutory seat in Berkeley Heights, New Jersey, USA. All changes in carrying amount have been recognized in 2012 in the consolidated comprehensive income.

Inter-company transactions, balances and unrealised gains on transactions between group companies are eliminated. Unrealised losses are also eliminated. When necessary amounts reported by subsidiaries have been adjusted to conform with the group's accounting policies.

(b) Changes in ownership interests in subsidiaries without change of control

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the owners in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

(c) Disposal of subsidiaries

When the group ceases to have control any retained interest in the entity is re-measured to its fair value at the date when control is lost, with the change in carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity are accounted for as if the group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in other comprehensive income are reclassified to profit or loss.

2.3 Foreign currency translation

(a) Functional and presentation currency

Items included in the financial statements of each of the group's entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in Euros, which is the company's presentation currency.

(b) Disposal of foreign operation

On the disposal of a foreign operation, all of the exchange differences accumulated in equity in respect of that operation attributable to the equity holders of the company are reclassified to profit or loss. In 2012 the group's only non-Euro entity, Avantium Technologies Inc., has been dissolved and the currency translation reserve has also in 2012 been attributed to the owners of the parent.

(c) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuations where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the statement of comprehensive income.

Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents are presented in the statement of comprehensive income within 'finance income or cost'.

(d) Group companies

The results and financial position of all the group entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;
- Income and expenses for each statement of comprehensive income are translated at the average exchange rates; and
- All resulting exchange differences are recognized as a separate component of equity.

2.4 Use of estimates

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. For us, the use of estimates is or could be a significant factor affecting the reported carrying values of property, plant and equipment, intangibles, trade and other receivables and trade and other payables. Despite management's best efforts to accurately estimate such amounts, actual results could materially differ from those estimates.

In the year ended 31 December 2013, we changed our estimates of the earn-out related to the disposed Pharma Services and decided to fully impair the remaining book value. The change in estimate is a result of future expected cash flows that have negatively affected the useful life of the earn-out. The effect on the result for the year 2013 was to reduce the result by Euro 0.2 million.

2.5 Property, plant and equipment

Property, plant and equipment comprise mainly the pilot plant, laboratory equipment, hardware and leasehold improvements. All property, plant and equipment is stated at historical cost less accumulated depreciation. Historical cost includes expenditures that are directly attributable to the acquisition of the items. Leasehold improvements include capitalization of the estimated costs associated with removing and restoring the leased buildings into its original condition.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the group and the cost of the item can be measured reliably. All other repairs and maintenance charges are expensed in the financial period in which they are incurred.

Depreciation is calculated using the straight-line method to allocate their cost of the assets to their residual values over their estimated useful lives as follows:

− Leasehold improvements	5-20 years
− Machinery, laboratory equipment and vehicles	5 years
− Computer hardware	3 years
− Office furniture and equipment	3-5 years

The pilot plant is classified as 'Machinery' and will be depreciated in 5 years. New parts of the pilot plant which are classified as 'Construction in progress' will only be depreciated after finalisation. The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount (also refer to note 2.6 p. [•]).

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount. Gains and losses are included in the consolidated statement of comprehensive income.

2.6 Intangible assets

(a) Research and development

Research expenditures are recognized as expenses as incurred. Development costs that are directly attributable to the design and testing of identifiable and unique products controlled by the group are recognized as intangible assets when the following criteria are fulfilled:

- It is technically feasible to complete the intangible asset so that it will be available for use or sale;
- Management intends to complete the intangible asset and use or sell it;
- There is an ability to use or sell the intangible asset;
- It can be demonstrated how the intangible asset will generate probable future economic benefits;
- Adequate technical, financial and other resources to complete the development and to use or sell the intangible asset are available; and
- The expenditure attributable to the intangible asset during its development can be reliably measured.

Current revenues are generated from products Crystal16™, Crystalline™ and Flowrence™ for which development expenses have been capitalized. The expenditures capitalized include the cost of materials, direct labour and an appropriate proportion of overheads.

Other development expenditures that do not meet these criteria are recognized as an expense as incurred. Development costs previously recognized as an expense are not recognized as an asset in a subsequent period.

Capitalized development costs are recorded as intangible assets and amortized from the point at which the asset is ready for use on a straight-line basis over its estimated useful life of 5 years. Intangible assets not ready for use are tested for impairment at least on an annual basis.

Amortization of development costs is included in cost of sales in the statement of comprehensive income. All development costs arose from internal development.

(b) Computer software

Acquired computer software licenses are capitalized on the basis of the costs incurred to acquire and use the specific software. These costs are amortized over their estimated useful lives of 3 years.

Costs associated with developing or maintaining computer software programs are recognized as expenses as incurred. Development costs that are directly attributable to the design and testing of identifiable and unique software products controlled by the group, that will probably generate economic benefits exceeding costs beyond one year, are recognized as intangible assets.

2.7 Impairment of non-financial assets

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets other than goodwill that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

2.8 Non-current assets (or disposal groups) held for sale

Non-current assets (or disposal groups) are classified as assets held for sale when their carrying amount is to be recovered principally through a sale transaction and a sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell.

2.9 Financial assets

2.9.1 Classification

The group classifies its financial assets in the loans and receivables category. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of its financial assets at initial recognition.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for maturities greater than 12 months after the balance sheet date. These are classified as non-current assets. The group's loans and receivables comprise 'trade and other receivables' and 'cash and cash equivalents' in the balance sheet.

2.9.2 Recognition and measurement

Regular purchases and sales of financial assets are recognized on the trade-date, the date on which the group commits to purchase or sell the asset. Loans and receivables are subsequently carried at amortized cost using the effective interest method.

2.10 Impairment of financial assets

Assets carried at amortized cost

The group assesses at the end of each reporting year whether there is objective evidence that a financial asset or group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganisation, and where observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

For loans and receivables category, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced and the amount of the loss is recognized in the consolidated statement of comprehensive income. If a loan or held-to-maturity investment has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate determined under the contract. As a practical expedient, the group may measure impairment on the basis of an instrument's fair value using an observable market price.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized (such as an improvement in the debtor's credit rating), the reversal of the previously recognized impairment loss is recognized in the consolidated statement of comprehensive income.

2.11 Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the first-in, first-out (FIFO) method. The cost of raw materials, finished goods and work in progress comprises all purchase costs including charges incurred to bring inventories to their current location and into their current state. It excludes borrowing costs. Net realisable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

2.12 Trade receivables

Trade receivables are amounts due from customers for products sold or services performed in the ordinary course of business. If collection is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade receivables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method, less provision for impairment.

2.13 Cash and cash equivalents

In the consolidated statement of cash flows, cash and cash equivalents includes cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less and bank overdrafts. In the consolidated balance sheet, bank overdrafts are shown within borrowings in current liabilities.

2.14 Share capital

Ordinary shares

Ordinary shares are classified as equity. Mandatorily redeemable preference shares are classified as liabilities. Incremental costs directly attributable to the issue of new ordinary shares or options are shown in equity as a deduction, net of tax, from the proceeds.

Treasury shares

Where any group company purchases the company's equity share capital (treasury shares), the consideration paid, including any directly attributable incremental costs (net of income taxes) is deducted from equity attributable to the company's equity holders until the shares are cancelled or reissued. Where such ordinary shares are subsequently reissued, any consideration received, net of any directly attributable incremental transaction costs and the related income tax effects, is included in equity attributable to the company's equity holders.

2.15 Trade payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

Trade payables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method.

2.16 Borrowings

Borrowings are recognized initially at fair value, net of transaction costs incurred. Borrowings are subsequently stated at amortized cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the statement of comprehensive income over the period of the borrowings using the effective interest method.

Fees paid on the establishment of loan facilities are recognized as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalized as a pre-payment for liquidity services and amortized over the period of the facility to which it relates.

2.17 Current and deferred income tax

The tax expense for the year comprises current and deferred tax. Tax is recognized in the statement of comprehensive income, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case the tax is also recognized in other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the company's subsidiaries and associates operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognized, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred income tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes assets and liabilities relate to income taxes levied by the same taxation authority on either the taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

2.18 Employee benefits

(a) Pension obligations

The group operates a defined contribution pension plan for all employees funded through payments to an insurance company. The group has no legal or constructive obligations to pay further contributions if the plan does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior years. The contributions are recognized as employee benefit expense when they are due. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

(b) Share-based payments

The group operates a share-based compensation plan for its employees, also refer to note 11 p. [•]. This plan is classified as an equity-settled share option plan which was adopted in 2006 (“Avantium Option Plan”).

Share options granted to employees are measured at the fair value of the equity instruments granted, or indirect method of measurement. Fair value is determined through the use of an option-pricing model considering, amongst others, the following variables:

a) The exercise price of the option;
b) The expected life of the option;
c) The current value of the underlying shares;
d) The expected volatility of the share price, calculated considering the effect of dividends on stock price;
e) The dividends expected on the shares; and
f) The risk-free interest rate for the life of the option.

For the company’s share option plan, management’s judgment is that the Binomial option valuation model is most appropriate for determining fair values as this model allows accounting for non-transferability, vesting conditions and early exercise. Until the listing of our shares, management needs to estimate the fair value of our shares and the expected volatility of that value. These assumptions and estimates are further discussed in note 13 p. [•] to the IFRS consolidated financial statements. The result of the share option valuations and the related compensation expense is dependent on the model and input parameters used. Even though management considers the fair values reasonable and defensible based on the methodologies applied and the information available, others might derive at a different fair value for each of the company’s share option plan.

The costs of the employee share-based payment plan are measured by reference to the fair value of the options at the date at which the options are granted using a Binomial option valuation model. For the equity-settled Avantium Option Plan, the fair value is determined at the grant date.

The fair value of the employee services received in exchange for the grant of the options is recognized as an expense. For share-based payments that do not vest until the employees have completed a specified period of service, the group recognizes the services received as the employees render service during that period. The company treats each instalment of a graded vesting award as a separate share option grant.

At each balance sheet date, the company revises its estimates of the number of options that are expected to become exercisable. It recognizes the impact of the revision of original estimates, if any, in the statement of comprehensive income and for the equity settled plan a corresponding adjustment to equity.

The proceeds received from exercised options net of any directly attributable transaction costs are credited to share capital (nominal value) and share premium.

(c) Profit-sharing and bonus plans

The group recognizes a liability and an expense for bonuses and profit-sharing where contractually obliged or where there is a past practice that has created a constructive obligation.

2.19 Provisions

Provisions are recognized when the group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount can be reliably estimated.

Provisions for decommissioning costs are based on current requirements to return the building into its original condition. The present value of the liability is calculated based on the estimated period of use of the related asset. The liability is recognized (together with a corresponding amount as part of the related property, plant and equipment) once an obligation is legal or constructive.

The group provides for the estimated cost of product warranties and product returns at the time revenue is recognized and the group has a constructive obligation. Warranty provision is established based on the group's best estimates of the amounts necessary to settle future and existing claims on products sold as of the balance sheet date. Product return provisions are based on our historical experiences.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation.

2.20 Revenue recognition

Revenue comprises the fair value of the consideration received or receivable for the sale of goods and services in the ordinary course of the group's activities. Revenue is shown net of value-added tax, returns, rebates and discounts and after eliminating sales within the group.

The group recognizes revenue when the amount of revenue can be reliably measured, it is probable that future economic benefits will flow to the entity and specific criteria have been met for each of the group's activities as described below. The group bases its estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

a) Sales of goods

Revenue from the supply of goods (CrystalBreeder™, Crystal16™, and Crystalline™ systems) is recognized as soon as all substantial rights and risks relating to the title to the goods are transferred to the customer.

b) Construction contracts

Construction contract revenue and expense related to Flowrence™ systems are accounted for using the percentage-of-completion method, which recognizes revenue as performance of the contract progresses. The contract progress is determined based on the percentage of costs incurred to date to total estimated cost for each contract after giving effect to the most recent estimates of total cost.

Construction contracts under the percentage-of-completion method are measured at construction cost plus profits earned based on the percentage of the contract completed. Revenues net of advance payments received are recognized as trade accounts receivable in the balance sheet. Variations in contract work, claims and incentive payments are included to the extent that it is probable that they will result in revenue which can be measured reliably.

Where the income of a construction contract cannot be estimated reliably, contract revenue that is probable to be recovered is recognized to the extent of contract costs incurred. Contract costs are recognized as expenses in the period in which they are incurred.

c) Multiple element arrangements

In certain circumstances, it is necessary to apply the recognition criteria to the separately identifiable components of a single transaction in order to reflect the substance of the transaction. Conversely, the recognition criteria are applied to two or more transactions together when they are linked in such a way that the commercial effect cannot be understood without reference to the series of transactions as a whole.

The group offers arrangements whereby a customer purchases systems and installations services under one arrangement. When such multiple element arrangements exist, an element is accounted for as a separable element if it has value to the customer on a standalone basis and the fair value can be determined objectively and reliably.

When Systems revenues and installation service revenues are identified as separable elements in a multiple element transaction, the Systems revenue recognized is determined based on the fair value of the Systems in relation to the fair value of the arrangement taken as a whole and is recognized as discussed above. The revenue relating to the installation service element, which represents the fair value of the installation services in relation to the fair value of the arrangement, is recognized upon completion of the installation services.

This separation is justified due to the fact that the supply and installation of the goods are offered to the customer separately as the installation can also be executed by an independent third party.

Timing of payment by the customer from the supply of goods is based on the contractual identified instalments. This could result, on a product by product basis, in advanced payments. These amounts are reported on the balance sheet under other current liabilities.

d) Sales of services

Revenue from the sale of services is recognized under the percentage-of-completion ("POC") method. Under the POC method, revenue is generally recognized based on the services performed to date as a percentage of the total services to be performed.

Timing of payment by the customer from sale of services is based on the contractual identified technical milestones. This could result, on a project by project basis, in unbilled revenues or advanced payments. These amounts are reported on the balance sheet under other receivables or other current liabilities.

For joint development agreements to further develop, test and prove the YXY technology, management identified milestones as included in the agreements as basis to determine revenue recognition in accordance with the POC method.

If circumstances arise that may change the original estimates of revenues, costs or extent of progress toward completion, estimates are revised. These revisions may result in increases or decreases in estimated revenues or costs and are reflected in income in the period in which the circumstances that give rise to the revision become known by management.

2.21 Government grants

Grants from the government are recognized at their fair value after receipt of the grant and after reasonable assurance the group will comply with all attached conditions.

Government grants relating to costs are deferred and recognized in the income statement over the period necessary to match them with the costs that they are intended to compensate.

Government grants relating to property, plant and equipment are included in non-current liabilities as deferred government grants and are credited to the income statement on a straight-line basis over the expected lives of the related assets.

2.22 Interest Income

Interest income is recognized using the effective interest method. When a loan and receivable is impaired, the group reduces the carrying amount to its recoverable amount, being the estimated future cash flow discounted at the original effective interest rate of the instrument, and continues unwinding the discount as interest income. Interest income on impaired loan and receivables is recognized using the original effective interest rate.

2.23 Leases

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the statement of comprehensive income on a straight-line basis over the period of the lease.

The group leases certain property, plant and equipment. Leases of property, plant and equipment where the group has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the lease's commencement at the lower of the fair value of the leased property and the present value of the minimum lease payments.

Each lease payment is allocated between the liability and finance charges. The corresponding rental obligations, net of finance charges, are included in other long-term payables. The interest element of the finance cost is charged to the income statement over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant and equipment acquired under finance leases is depreciated over the shorter of the useful life of the asset and the lease term.

3 Financial risk management

3.1 Financial risk factors

The group's activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. The group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the group's financial performance.

Risk management is carried out by the central Finance & Accounting department ("Group F&A") under policies approved by the board of directors. Group F&A identifies, evaluates and covers financial risks in close co-operation with the group's operating units. The board provides principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of non-derivative financial instruments, and investment of excess liquidity.

Financial instrument by category

Loans and receivables:

in Euro x 1,000		As at 31 December	
	Notes	**2013**	**2012**
Trade receivables	8	4,239	3,074
Other receivables	8	554	610
Cash and cash equivalents	9	5,425	3,904

Financial liabilities:

in Euro x 1,000		As at 31 December	
	Notes	**2013**	**2012**
Trade payables	12	3,290	3,092
Finance lease liabilities	13	10	-
Other liabilities	12	3,914	4,022

Also refer to note 12 p. [•] and 13 p.[•] for an overview of Trade and other payables and Borrowings.

(a) Currency risk

The group operates internationally and is exposed to foreign exchange risk primarily with respect to the US dollar. Foreign exchange risk arises from future commercial transactions, recognized assets and liabilities. Management has set up a policy that requires group companies to manage their foreign exchange risk against their functional currency. The group companies are required to close commercial transactions in Euros. Certain US based customers negotiate US dollar contracts. The numbers of those contracts are very limited and the group companies can close such contract only after written approval of management, and therefore the group's operations are not subject to significant foreign exchange rate risks. Foreign exchange risk arises when future commercial transactions or recognized assets and liabilities are denominated in a currency that is not the entity's functional currency.

The group had outstanding trade receivables in US dollars 586,000 (2012: US dollars 305,000) and outstanding trade payables in US dollars 285,000 (2012: US dollars 147,000) and in GB pounds 5,000 (2012: GB pounds 4,000). The group had no trade receivables or trade payables in other foreign currencies.

At 31 December 2013, if the currency had weakened by 10% against the US dollar with all other variables held constant, post-tax result for the year would have been Euro 48,000 higher (2012: Euro 5,000 higher) as the cash position included US Dollar 601,000. The group had no cash position in other foreign currencies.

(b) Credit risk

Credit risk is managed on group basis. The group does not have any significant concentrations of credit risk and is limited to outstanding trade receivables and cash and cash equivalents. On 31 December 2013, the largest single client exposure consisted of 22% of the outstanding trade receivables. The group clients are subject to creditworthiness tests. Sales are subject to payment conditions varying between payments in advance and 30 days after invoice date. For certain projects, deviations to this rule may apply only after approval of group F&A, in which case additional security, including guarantees and documentary credits, may be required. Management does not expect any losses from non-performance by its clients.

In 2013 nil Euro (2012: nil Euro) is written off and Euro 697,000 was past due of which 86% has been paid before the date of this report.

in Euro x 1,000	As at 31 December	
	2013	**2012**
Up to 3 months past due	697	754
3 – 6 months past due	-	7
	697	**761**

The maximum exposure to credit risk at the reporting date is the carrying value of each class of receivable mentioned above. The group does not hold any collateral as security.

(c) Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed credit facilities and the ability to close out market positions.

At the end of 2013, the group has a banking facility with the ABN AMRO Bank of Euro 2.0 million. All assets, excluding the intangible assets and the finance lease assets are pledged to the ABN AMRO Bank. Management monitors monthly rolling forecasts of the group's cash and cash equivalents (note 9 p. [•]) on the basis of actual results and expected cash flow.

The table below analyses the group's financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet to the contractual maturity. The amounts disclosed in the table are the contractual undiscounted cash flows. The specific time buckets are not mandated by the standard but are based on a choice of management.

At 31 December 2013:

in Euro x 1,000	**Less than 1 year**	**Between 1 and 2 years**	**Between 2 and 5 year**	**Over 5 years**	**Total**
Borrowings (ex finance lease liabilities)	-	1,850	1,800	1,996	5,646
Finance lease liabilities	4	5	-	-	9
Trade payables	3,290	-	-	-	3,290
Other current liabilities	554	-	-	-	554
	3,848	**1,855**	**1,800**	**1,996**	**9,498**

At 31 December 2012:

in Euro x 1,000	**Less than 1 year**	**Between 1 and 2 years**	**Between 2 and 5 year**	**Over 5 years**	**Total**
Borrowings	-	1,650	2,000	581	4,231
Trade payables	3,092	-	-	-	3,092
Other current liabilities	610	-	-	-	610
	3,703	**1,650**	**2,000**	**581**	**7,933**

The carrying amounts of these financial liabilities are assumed to approximate their fair values.

(d) Interest rate risk

At 31 December 2013, if variable interest rates on the euro-denominated borrowings and cash and cash equivalents had been 0.1% higher with all other variables held constant, post-tax results for the year would have been Euro 8,000 higher (2012: 1,000 lower) as a result of higher interest received. In 2013 we have not drawn our credit facility. The convertible loan and the innovation loan have fixed interest rates.

3.2 Capital management

The group's objective when managing capital is to safeguard the group's ability to continue as a going concern (also refer to 2.1.1 p. [•]) in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the group monitors capital on the basis of its adjusted solvability ratio. This ratio is calculated as adjusted equity divided by the adjusted balance sheet total.

The adjusted equity is calculated as equity:

- Plus liability to ordinary shareholders
- Minus the intangible assets, participating interests and receivables from shareholders

The adjusted balance sheet total is calculated as total assets:

- Minus the intangible assets, participating interest, receivables from shareholders and shares held in the own company

The adjusted solvability ratio's at 31 December 2013 and 2012 were as follows:

	As at 31 December	
in Euro x 1,000	**2013**	**2012**
Equity attributable to owners of the parent	(3,221)	6,712
Convertible bond	10,669	-
Intangible assets	(292)	(797)
Adjusted equity total	7,156	5,915
Adjusted balance sheet total	21,258	18,342
Adjusted solvability ratio	**34%**	**32%**

To improve the solvability ratio and cash position, the group raised new equity from new and existing investor for a total amount of Euro 26 million, also refer to note 25 p. [•].

3.3 Fair value estimation

Effective 1 January 2009, the group adopted the amendment to IFRS 7 for financial instruments that are measured in the balance sheet at fair value, this requires disclosure of fair value measurements by level of the following fair value measurement hierarchy:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (level 2).
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (level 3).

The group does not hold any financial instruments traded in active markets. For the finance lease liabilities we refer to note 13 p. [•].

4 Critical accounting estimates and judgments

Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

(a) Income taxes

The group, which has a history of recent tax losses, recognizes deferred tax assets arising from unused tax losses or tax credits only to the extent that the relevant fiscal unity has sufficient taxable temporary differences or there is convincing other evidence that sufficient taxable profit will be available against which the unused tax losses or unused tax credits can be utilized by the fiscal unity. Management's judgment is that there is not a high degree of certainty that sufficient profits will be earned to utilize the losses. Consequently, based on management's judgment, sufficient convincing other evidence is not available and a deferred tax asset is therefore not recognized.

(b) Share-based payments

Share options granted to employees are measured at the fair value of the equity instruments granted (indirect method of measurement). Fair value is determined through the use of an option-pricing model considering, among others, the following variables:

a) The exercise price of the option;
b) The expected life of the option;
c) The current value of the underlying shares;
d) The expected volatility of the share price, calculated considering the effect of dividends on stock price;
e) The dividends expected on the shares; and
f) The risk-free interest rate for the life of the option.

For the company's share option plan, management's judgment is that the Binomial method is most appropriate for determining fair values as this method allows accounting for non-transferability, vesting conditions and early exercise. Since the company is not listed, there is no published share price information. Consequently, the company needs to estimate the fair value of its shares and the expected volatility of that value. These assumptions and estimates are further discussed in note 11 p. [•] to the consolidated financial statements.

The result of the share option valuations and the related compensation expense is dependent on the model and input parameters used. Even though management considers the fair values reasonable and defensible based on the methodologies applied and the information available, others might derive at a different fair value for each of the company's share option plan.

(c) Research and development expenditures

The project stage forms the basis in the decision whether costs made for the group's product development programs should be capitalized or not. Management judgment is required in determining when the group should start capitalizing development costs as intangible assets.

Management determined that for a system commercial feasibility is, in general, probable when the group has built a successful prototype and has interested customers for the commercial product. Management determined that for product development (note 2.6 p. [•]) commercial feasibility is, in general, probable when the group has successfully completed essential testing phases and started discussions with potential partners for the commercialization opportunities.

(d) Impairment of assets

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Assets that are not subject to amortization are tested annually for impairment. For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). The intangibles not subject to amortization are tested for impairment as part of this cash generating unit. The recoverable amount of the applicable cash-generating unit is determined based on value-in use calculations by using the discounted cash flow model.

In performing impairment testing of assets, management must make significant judgments and estimates to determine whether the present value of cash flows attributable to the cash-generating unit are less than the unit's carrying value. The above mentioned judgments and estimates are derived from the group's strategic plans and long-term forecasts. The discount rates used are estimated post-tax rates which reflect specific risks relating to the relevant segment.

(e) Revenue recognition

The group uses the percentage-of-completion ("POC") method in accounting for its fixed-price contracts to construct the Flowrence™ systems and the fixed-price contracts to deliver services. For the Flowrence™ systems the stage of completion is measured by reference to the total contract costs incurred up to the end of the reporting year as a percentage of total estimated costs for each contract. For services, use of the POC method requires the group to estimate the services performed to date as a proportion of the total services to be performed. To define the recognized revenues, the group estimates the required total costs (Flowrence™) or man-hours (Services) to complete each project.

(f) Provisions

In February 2007 the company signed a lease agreement for its facilities in Amsterdam at the Zekeringstraat 29 and 31. The term of this agreement is 10 years with options to extend and the operating lease commitments under the lease agreement are Euro 2.4 million (2012: 3.0 million). The term includes also a provision to return the building into its original condition. Therefore a decommissioning liability is recognized. The estimate for the decommissioning liability is based on an estimated number of hours and hourly rate, based on historical experience and external costs using an interest percentage of 5%. The company is reasonable certain that the option to extend for 10 years will be used. Therefore the present value of the decommissioning liability is calculated based on the assumption that the costs will occur after 20 years.

In December 2010 we signed a lease agreement for the pilot plant in Geleen for 5 years. Our operating lease commitments under the lease agreement at 31 December 2013 are Euro 234,000 (2012: 297,000).

5 Property, plant and equipment

in Euro x 1,000	Leasehold improvements	Laboratory equipment and vehicles	Hardware	Office furniture and equipment	Construction in progress	Total
At 1 January 2012						
Cost	8,129	18,855	1,996	1,597	2,046	32,624
Accumulated depreciation	(4,317)	(16,659)	(1,864)	(1,567)	-	(24,408)
Net book amount	**3,812**	**2,197**	**132**	**30**	**2,046**	**8,216**
Year ended 31 December 2012						
Opening net book amount	3,812	2,197	132	30	2,046	8,216
Additions	246	234	74	5	2,442	3,001
Transfers	202	3,787	29	34	(4,053)	-
Depreciation charge	(414)	(1,004)	(85)	(17)	-	(1,520)
Closing net book amount	**3,846**	**5,214**	**150**	**52**	**435**	**9,697**
At 31 December 2012						
Cost	8,577	22,876	2,099	1,637	435	35,625
Accumulated depreciation	(4,731)	(17,662)	(1,949)	(1,585)	-	(25,928)
Net book amount	**3,846**	**5,214**	**150**	**52**	**435**	**9,697**
Year ended 31 December 2013						
Opening net book amount	3,846	5,214	150	52	435	9,697
Additions	153	393	10	16	1,388	1,960
Disposals	-	(51)	-	-	-	(51)
Transfers	363	225	-	-	(637)	(49)
Depreciation charge	(523)	(1,325)	(88)	(16)	-	(1,952)
Closing net book amount	**3,839**	**4,457**	**72**	**51**	**1,187**	**9,606**
At 31 December 2013						
Cost	9,093	23,443	2,109	1,653	1,187	37,485
Accumulated depreciation	(5,254)	(18,987)	(2,037)	(1,601)	-	(27,879)
Net book amount	**3,839**	**4,457**	**72**	**51**	**1,187**	**9,606**

The additions and transfers are predominately related to investments in the pilot plant in Geleen.

The group is a lessee under a finance lease for enterprise software. The lease term is three years and ownership of the asset lies within the group. The laboratory equipment and software include a net book amount at 31 December 2013 of 10,000 Euro (2012: nil) where the group is lessee under finance leases:

(In Euro x 1,000)	**2013**	**2012**
Cost – capitalised finance leases	1,456	1,441
Accumulated depreciation	1,446	1,441
Net book amount	10	0

Depreciation expense of Euro 292,000 (2012: 367,000) has been charged in 'cost of sales', Euro 1,342,000 (2012: 819,000) in 'research and development costs' and Euro 317,000 (2012: 334,000) in 'general and administrative costs'.

6 Intangible assets

(In Euro x 1,000)	**Development costs**	**Software**	**Other**	**Total**
At 1 January 2012				
Cost	2,159	6,191	968	9,318
Accumulated amortization and impairment	(1,610)	(5,929)	(477)	(8,016)
Net book amount	**549**	**262**	**491**	**1,302**
Year ended 31 December 2012				
Opening net book amount	549	262	491	1,302
Additions	-	40	-	40
Amortization charge	(250)	(113)	(182)	(545)
Closing net book amount	**299**	**189**	**310**	**797**
At 31 December 31 2012				
Cost	2,159	6,231	968	9,358
Accumulated amortization and impairment	(1,860)	(6,042)	(659)	(8,561)
Net book amount	**299**	**189**	**310**	**797**
Year ended 31 December 2013				
Opening net book amount	299	189	310	797
Additions	-	39	-	39
Transfers	-	49	-	49
Amortization charge	(170)	(129)	(122)	(421)
Impairment	-	-	(172)	(172)
Closing net book amount	**129**	**148**	**15**	**292**
At 31 December 2013				
Cost	2,159	6,270	968	9,397
Accumulated amortization and impairment	(2,030)	(6,171)	(781)	(8,982)
Net book amount	**129**	**148**	**15**	**292**

Amortization of Euro 212,000 (2012: 462,000) is included in the 'cost of sales' in the income statement; Euro 29,000 (2012: 20,000) in 'research and development costs' and Euro 351,000 (2012: 63,000) in 'general and administrative costs'.

Development costs

The development costs as at 31 December 2013 consist of the development and prototype expenses of the systems Crystal16™, Crystalline™, CrystalBreeder™ and Flowrence™.

- The Crystal16™ is a system that enables customers in the Pharmaceutical industry to understand their crystallization process better and perform experiments themselves and was introduced to the market in 2002. A new version of the Crystal16™ was launched in 2013.
- The Crystalline is a system developed for the Pharmaceutical industry, which is the logical next step after scientists have completed their first screening work on the Crystal16 at 1 ml scale. In addition to the transmission measurements, the Crystalline allows for more precise observation of crystallizations in 4 or 8 reactors in parallel at 5 ml scale by means of video microscope and later also Raman spectroscopy. The Crystalline was launched in 2008 and generated its first sales in 2009.
- The CrystalBreeder is the next generation multi-reactor crystallization platform for medium-throughput solid-state research, operating at a working volume of 0.1 ml and enables rapid complete crystallization screens with as little as 1 mg of sample. The CrystalBreeder was launched in 2013.

- The Flowrence™ is a system that enables customers in the Chemical industry to understand their catalysis process better and perform experiments themselves and was introduced to the market in 2006.

Software and Other intangibles

Software mainly comprises purchased general laboratory and office related software. Other intangibles are the in-kind contribution of a shareholder relating to software at the foundation of the group and compensation paid to a third party to exclusively use parts of their technology.

Impairment tests

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

The capitalized development costs related to the Tigris program have been disposed of as part of the Pharma Services spin off. The group is entitled to a certain percentage of revenue from sale of Tigris or Tenofovir patents. This earn-out was in 2011 capitalised as an intangible asset of Euro 550,000 (see 'additions'), without an impact on cash and was amortized in 7 years starting in 2011. As the outlook for future cash flows was less positive the group accelerated during 2012 the amortization to 4 years and in 2013 decided to completely impair the remaining book value. This had a negative effect of Euro 0.2 million on the year 2013.

7 Inventories

(In Euro x 1,000)	**2013**	**2012**
Raw materials	741	485
Finished goods	383	288
Work in progress	186	137
	1,309	**910**

The costs of inventories recognized as an expense and included in Cost of Sales' amounted to nil Euro (2012: nil).

8 Trade and other receivables

(In Euro x 1,000)	**2013**	**2012**
Trade receivables	4,239	3,074
Social security and other taxes	382	408
Other receivables	171	202
Prepayments and accrued income	125	147
Current portion	**4,917**	**3,831**

In 2013 no impairment of trade receivables was recorded and no write-offs of trade receivables were recognized. At 31 December 2013, trade receivables of Euro 697,000 were past due (30 days or more after invoice date) but not impaired, which is 23% of the total outstanding amount. See also note 3.1 p. [•]. With regard to other receivables, in November 2013 the group settled the remaining loan and wrote off the remaining Euro 30,000, also refer to note 18 p. [•].

9 Cash and cash equivalents

(In Euro x 1,000)	**2013**	**2012**
Cash at bank and on hand	5,425	3,904
Cash and cash equivalents (excluding bank overdrafts)	**5,425**	**3,904**

Cash and cash equivalents include the following for the purpose of the statement of cash flows:

(In Euro x 1,000)	**2013**	**2012**
Cash and cash equivalents	5,425	3,904
Bank overdrafts (note 13)	-	-
Cash and cash equivalents	**5,425**	**3,904**

The Cash at bank and on hand includes an amount of Euro 0.2 million (2012: 1.4 million) that is restricted and not free available for the group. This amount is received for government grants and has to be forwarded to government grant partners.

10 Share capital and premium

10.1 Ordinary shares

The authorized share capital amounts to Euro 2,000,000 consisting of 200,000,000 ordinary shares, with a nominal value of Euro 0.01 each. The issued share capital at 31 December 2013 comprises of 92,589,875 ordinary shares (2012: 92,589,875). In 2013 there were no options exercised by employees. All 92,589,875 shares issued are fully paid and 41,462 shares remain in treasury.

10.2 Other reserves

The costs of equity settled share-based payments to employees are recognized in the statement of comprehensive income, together with a corresponding increase in equity during the vesting period, taking into account (deferral of) corporate income taxes. The accumulated expense of the share incentive plan recognized in the statement of comprehensive income is shown as a total of the equity category “other reserves” in the “consolidated statement of changes in equity”.

10.3 Currency translation difference

The currency translation difference was caused by our group company Avantium Technologies Inc. as its net asset was translated from US Dollar into Euro. In 2012 the group dissolved her only non-Euro entity and recognized the currency translation reserve of Euro 72,000 in the consolidated comprehensive income. Currently the group does not hold a company reporting in any other currency than Euro and therefore does not hold a currency translation reserve.

11 Share-based payment

The company operates a share-based payment plan for its employees. This Avantium Option Plan, which was adopted in 2006, is classified as an equity-settled share option plan. Each option relates to one share. Eligible employees are offered options to purchase depositary receipts of ordinary shares in the company. The depositary receipts acquired upon exercise of options granted under the equity-settled Avantium Option Plan are blocked (i.e. may not be transferred, sold, assigned, charged, pledged or encumbered during a vesting period of three years) as follows: 33% of the depositary receipts will be unblocked following the first anniversary of the date of grant of the relevant options, an additional 33% of the depositary receipts will be unblocked following the second anniversary of the date of grant of the relevant options and the remaining 34% of the depositary receipts will be unblocked following the third anniversary of the date of grant of the relevant options. Granted options have a duration of 5 years. On November 30, 2011 the Supervisory Board decided to adopt the rules of the Avantium Option Plan, to extend the duration of granted options from 5 years to 10 years and this was approved in the general meeting of shareholders on May 10, 2012.

In 2013 270,000 (2012: 654,800) share options were granted to key employees of the group. A total share-based payment expense amounting Euro 1,192,000 has been recognized in the statement of comprehensive income for 2013 (2012: 1,342,000) based on the calculated fair value of the share options granted in 2013, 2012, 2011 and 2010 and their vesting periods. The adjustment to equity when recognizing an expense for the equity-settled Avantium Option Plan is recorded within ‘other reserves’.

Avantium Holding B.V. has issued shares resulting from the exercise of options to the “Stichting Administratiekantoor Avantium’’ (the “Foundation”). The Foundation has issued depository receipts to members of the Executive Board, senior management and certain other employees. The foundation is a consolidated special purpose entity by Avantium Holding B.V., however the shares held by the Foundation only represent the voting rights associated with the issued shares and depository receipts representing all economic benefits are issued by the Foundation to members of the Executive Board, senior management and certain other employees and consequently the shares held by the Foundation are not considered treasury shares.

The movements in outstanding options with the executive board, senior management and certain other employees can be summarized as follows:

	2013 Number	Average exercise price (in Euro)	2012 Number	Average exercise price (in Euro)
Number of options outstanding 1 January	**7,185,171**	**0.01**	**6,733,802**	**0.06**
Number of options granted	270,000	0.01	654,800	0.01
Number of options exercised	-	-	(199,831)	0.01
Number of options forfeited	-	-	(3,600)	0.01
Number expired	-	-	-	-
Number of options outstanding 31 December	**7,455,171**	**0.01**	**7,185,171**	**0.01**

Share options outstanding at the end of the year have the following expiry date and exercise price:

Expiry date	Exercise price in Euro per option	Options 2013	Options 2012
19 October 2016	0.76	462,537	462,537
11 May 2017	0.76	174,634	174,634
1 October 2018	0.01	736,371	736,371
1 May 2019	0.01	756,911	756,911
4 November 2020	0.01	1,025,131	1,025,131
30 November 2021	0.01	3,374,787	3,374,787
16 April 2022	0.01	138,000	138,000
14 December 2022	0.01	516,800	516,800
19 April 2023	0.01	240,000	-
20 August 2023	0.01	30,000	-
		7,455,171	**7,185,171**

All outstanding options are exercisable but still restricted by the vesting period. The fair value of options under the equity-settled Avantium Option Plan is determined using the Binomial option valuation model.

The significant inputs into this model were as follows:

	Aug-13	Apr-13	Dec-12	Apr-12	Nov-11	Sep-10	Apr-10
Share price (range)	1.52	1.45	1.45	0.94	0.54	0.51	0.51
Volatility	88%	90%	90%	80%	82%	33%	33%
Risk free interest rate	1.14%	0.62%	0.63%	1.23%	1.82%	1.62%	2.20%
Dividend yield	-	-	-	-	-	-	-
Maturity	10 years	10 years	10 years	10 years	5 years	5 years	5 years
Exit rate	5%	5%	5%	5%	5%	5%	5%

The historical volatility used is based on the daily stock returns from a comparable listed company over a period equal to the maturities of each plan related to the valuation dates.

12 Trade and other payables

(In Euro x 1,000)	2013	2012
Trade payables	3,290	3,092
Social security and other taxes	308	241
Holiday pay and holiday days	485	501
Other current liabilities	3,914	4,022
	7,997	**7,856**

The other current liabilities comprises of the operating lease commitment of rent, accrued expenses and pension costs.

13 Borrowings

The carrying amounts of the group’s borrowings are denominated in Euro.

Non-current

(In Euro x 1,000)	**2013**	**2012**
Innovation loan	3,996	2,581
Loan Witte Zwaan Holding B.V.	1,650	1,650
Finance lease liabilities	5	-
	5,651	**4,231**

Current

(In Euro x 1,000)	**2013**	**2012**
Bank overdrafts	-	-
Convertible bond	10,669	-
Finance lease liabilities	5	-
	10,674	**-**
Total borrowings	**16,325**	**4,231**

(a) Innovation loan

On 28 October 2010 Agentschap NL granted the group a Euro 4 million Innovation Loan facility, to be paid back between 2015 and 2020. The group started drawing the loan facility in 2012 and the current draw down is Euro 3,777,000. This loan has a fixed interest rate of 6.2% per annum and the accumulated interest is Euro 219,000 (Euro 26,000 for 2012 and Euro 193,000 for 2013). Pledged to Agentschap NL are all assets financed by this Innovation Loan facility and the group used it to finance part of the YXY Pilot Plant assets.

(b) Loan Witte Zwaan Holding B.V.

In 2012 the group sold the Profit Participating Loan (PPL) of Euro 1,650,000 for one Euro to Witte Zwaan Holding B.V. which has been recorded as part of 'other losses'. The loan is not interest bearing and will not be repaid within one year.

(c) Bank overdrafts

At the end of 2012, the group has a banking facility with the ABN AMRO Bank of Euro 2.0 million with an interest rate determined on the basis of the average one-month EURIBOR +1,75% per annum. Also refer to note 21. At 31 December 2013 the group had not drawn down any amounts under this facility.

(d) Convertible bond

In January 2013 the existing shareholders committed to a 1% per month subordinated convertible bond of Euro 10 million which was fully drawn down in 2013. This bond will mandatorily convert at the next financing round under certain terms and conditions.

(e) Finance lease liabilities

The group leases certain enterprise software by means of finance leases, also refer to note 6.

(In Euro x 1,000)	**2013**	**2012**
Gross finance lease liabilities – minimum lease payments:		
No later than 1 year	4	-
Later than 1 year and no later than 5 years	5	-
Later than 5 years	-	-
	9	**-**
Future finance charges on finance leases	(1)	-
Present value of finance lease liabilities	**8**	**-**

The present value of finance lease liabilities is as follows:

No later than 1 year	4	-
Later than 1 year and no later than 5 years	4	-
Later than 5 years	-	-
	8	**-**

14 Provisions for other liabilities and charges

(In Euro x 1,000)	**Decommissioning Liability**	**Warranty provision**	**Total**
At January 1, 2012	234	87	321
Additional provision	-	22	22
Unwinding of discount	10	-	10
Used during the year	-	(14)	(14)
At December 31, 2012	**245**	**95**	**340**
At January 1, 2013	**245**	**95**	**340**
Additional provision	-	172	172
Unwinding of discount	10	-	10
Unused amounts reversed	-	(63)	(63)
Used during the year	-	(11)	(11)
At December 31, 2013	**256**	**193**	**449**

The provisions relate to the decommissioning liability for restoring leased property into its original condition and to warranty costs for delivered systems.

a) Decommissioning liability

In February 2007 the company signed a lease agreement for its facilities in Amsterdam at the Zekeringstraat 29 and 31. The term of this agreement is 10 years with options to extend. The term includes also a provision to return the building into its original condition. Therefore a decommissioning liability is recognized. The estimate for the decommissioning liability is based on an estimated number of hours and hourly rate, based on historical experience and external costs using an interest percentage of 5%. The company is reasonable certain that the option to extend for 10 years will be used. Therefore the present value of the decommissioning liability is calculated based on the assumption that the costs will occur after 20 years.

b) Warranty

The provision for warranty consists of estimated costs for repairs of installed products during the warranty period of one year. This estimate is based on historical experience of broken or repaired units and the costs associated with that. This provision is current (shorter than 1 year). Unused amounts are reversed after expiration of the warranty period.

15 Revenue

Revenue in 2013 decreased overall with 3% to Euro 14,800,000 (2012: 15,291,000). Revenue recognized on sale of goods amounts to Euro 1,731,000 (2012: 1,779,000) and other revenue recognized using the POC method amounts to Euro 13,069,000 (2012: 13,512,000).

16 Expenses by nature

Overall operational costs were Euro 1,048,000 higher in 2013 compared to 2012 excluding the Euro 1,650,000 of other losses. The increase is driven by Euro 1,082,000 higher cost of sales that includes the costs of goods sold (COGS). Mainly the YXY COGS went up with Euro 827,000 being costs made at toll manufacturers. Cost of sales in 2013 amounts to Euro 10,092,000 (2012: 9,010,000) and besides COGS comprises of cost of goods sold, allocated employee costs, depreciation costs of intangible and tangible assets related to revenues, costs of laboratory consumables and specific costs related to revenues.

Selling and marketing costs in 2013 amount to Euro 2,093,000 (2012: 2,453,000) and comprise of allocated employee costs, travel costs and sales and marketing costs. The decrease was driven by relatively less selling and marketing FTE; in 2013 6% of the group's FTE were in selling and marketing versus 8% in 2012.

Research and development costs in 2013 amount to Euro 9,429,000 (2012: 9,260,000) and comprise of allocated employee costs, depreciation and amortization costs of intangible and tangible assets not related to revenues and specific purchases not related to revenues. The increase was driven by higher depreciation costs for the pilot plant. The higher costs associated with a higher headcount of 11 FTEs was offset by a Euro 0.6 million higher amount of subsidies recognized by the same FTE.

General and administrative costs in 2013 amount to Euro 3,486,000 (2012: 3,329,000) and comprise of corporate and patent costs, facility and office costs and allocated employee costs. The increase was driven by the impairment of the earn-out, refer to note 6 p. [•].

(In Euro x 1,000)		**2013**	**2012**
Employee benefit expenses	(note 17)	9,961	10,548
Depreciation, amortization and impairment charge	(note 5, 6)	2,544	2,065
Office and housing expenses		2,015	1,938
Patent, license, legal and advisory		2,055	1,781
Laboratory expenses		1,883	1,916
Sales and marketing expenses		1,009	1,081
Cost of goods sold		4,358	3,281
Other operating expenses		1,276	1,443
		25,101	**24,053**

Patent, license, legal and advisory costs include fees for food contact studies and regulatory filings. Other operating expenses include financial statements audit fees amounting to Euro 58,000 (2012: 56,000). This fee relates only to the procedures applied to the group and its consolidated group entities by accounting firms and external auditors as referred to in Section 1(1) of the Dutch Accounting Firms Oversight Act (Dutch acronym: Wta).

17 Employee benefits

(In Euro x 1,000)	**2013**	**2012**
Wages and salaries	7,341	7,768
Social security costs	1,032	1,011
Share options granted to directors and employees (note 11)	1,192	1,342
Pension costs – defined contribution plans	397	427
	9,961	**10,548**
Number of full time equivalent employees at December 31	**126.0**	**108.4**

The average FTE during 2013 amounts to 117 (2012: 107).

The group received government grants in 2013 and 2012. In 2013 Euro 598,000 (2012: 529,000) government grants were recognized relating to research and development (“WBSO”) and Euro 813,000 (2012: 190,000) for other specific development projects related to development programs which was deducted from the employee benefits.

18 Finance income and costs

(In Euro x 1,000)	**2013**	**2012**
Finance costs:		
- Innovation loan	(193)	(26)
- Convertible bond	(669)	-
- Settlement loan Crystallics	(36)	-
- Provisions: unwinding of discount (note 14)	(10)	(10)
- Finance lease liabilities	(1)	(8)
- Net foreign exchange gains (loss)	(5)	(4)
- Interest current accounts	(115)	(161)
Finance costs	**(1,028)**	**(209)**
Finance income:		
- Interest current accounts	202	184
- Interest loan to Crystallics	1	3
Finance income	**203**	**187**
Net Finance costs	**(825)**	**(22)**

The Finance costs for the Innovation loan and Convertible bond are non-cash; interest is added to the principal amount of the loans, also refer to note 13 p. [•].

The group issued in 2011 a Euro 150,000 loan to Crystallics to facilitate moving to another location. In November 2013 the group wrote off Euro 36,000 of receivables including Euro 30,000 of the remaining loan to settle a dispute over the amount of carry forward losses transferred to Crystallics after the spin out of the Pharma Services business.

19 Income tax expense

No tax charges or tax income have been recognized in 2013 since the company is in a loss making position and no deferred tax asset has been recognized for carry forward losses. The loss in 2013 is mainly driven by significant investments in the product development programs and the pilot plant. As a result of the significant investment in our product development programs we do not expect any taxable income in the following year.

The company forms an income tax group with its subsidiaries, except for Avantium Knowledge Centre B.V. Under the standard conditions, the members of the tax group are jointly and severally liable for any taxes payable by the group.

Tax loss carry-forward is subject to a time limitation of nine years. In 2011 we have completed a fiscally approved transaction that decreased but at the same time extended a significant part of our losses carried forward. Fiscally IP was valued, annually being amortized over 10 years and ensuring the carry forward losses will increase again. The total amount of tax losses carried forward as of 31 December 2013 is estimated at Euro 39,840,000 and in 2023 a first part (the loss of 2012) will expire.

	2013	2012
(In Euro x 1,000)		
Current tax	-	-
Deferred tax	-	-
	-	-
Loss before tax	(11,125)	(10,433)
Temporary differences	-	-
Expenses not deductible for tax purposes	-	-
Tax losses for which no deferred income tax asset was recognized	(11,125)	(10,433)
Tax charge	-	-

The nominal tax rates and amounts in 2013 are 20% up to Euro 200,000 and 25% over Euro 200,000.

20 Dividends

The company declared no dividends for any of the years presented in these consolidated financial statements.

21 Cash flow statement

In the cash flow statement, purchases of property, plant and equipment comprise:

(In Euro x 1,000)	**2013**	**2012**
Additions according to note 5	1,960	3,001
Purchases of property, plant and equipment	**1,960**	**3,001**

22 Contingencies

On behalf of the group ABN AMRO Bank has issued a bank guarantee for a total amount of Euro 241,000 that covers the operating lease commitment to rent the site at the Zekeringstraat 29 – 31 for three months and decommissioning of the corridor between Penta1 en Penta2.

For our Euro 2 million credit facility, assets of the following legal entities, excluding the intangible assets and the finance lease assets are pledged to the ABN AMRO Bank:

- Avantium Holding B.V.
- Avantium Technologies B.V.
- Avantium Support B.V.
- Avantium Cleantech B.V.
- Avantium Chemicals B.V.

The consolidated balance sheets of these entities form the credit base and the credit agreement requires a solvability ratio above 35%. The solvability ratio of the credit base was 36% on 31 December 2013.

23 Commitments

Operating lease commitments

The operating lease commitments comprises to a lease contract to rent the site at the Zekeringstraat 29 – 31 for a remaining Euro 2,4 million and a lease contract for the pilot plant in Geleen for a remaining Euro 234,000. The contract of the Zekeringstraat 29 – 31 expires in 2017 and the group has an option to extend this period with two additional periods of 5 years. The contract of the pilot plant in Geleen expires in November 2015 and the group has an option to extend with one year,

The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

(In Euro x 1,000)	**2013**	**2012**
No later than 1 year	827	767
Later than 1 year and no later than 5 years	1,764	2,532
Later than 5 years	-	-
	2,591	**3,299**

24 Related-party transactions

The following transactions were carried out with related parties:

a) *Key management compensation*

Key management is defined as those persons having legal authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity. Our key management comprises the members of the Executive Board and the Supervisory Board.

The following persons are members of the Executive Board at December 31, 2013:

- Tom van Aken, Chief Executive Officer
- Frank Roerink, Chief Financial Officer

The following persons are members of the Supervisory Board at December 31, 2013:

- Jan van der Eijk, chairman
- Michiel de Haan, vice chairman
- Claude Stoufs
- Denis Lucquin
- Jonathan Wolfson

The total remuneration paid to or for the benefit of members of the Supervisory Board and of the Executive Board in 2013 amounted to Euro 187,000 and Euro 847,000 respectively. The following table provides the breakdown in the remuneration in 2013 of the members of the Executive Board and Supervisory Board:

(In Euro x 1,000)	Salary	Bonus	Share-based payments	Post-employee benefits	2013 Total
Supervisory board	50	-	137	-	187
Executive board	389	97	340	21	847
	439	**97**	**477**	**21**	**1,034**

(In Euro x 1,000)	Salary	Bonus	Share-based payments	Post-employee benefits	2012 Total
Supervisory board	50	-	12	-	62
Executive board	369	129	809	21	1,328
	419	**129**	**821**	**21**	**1,390**

b) Shares and share options held by key management

The Executive Board currently holds 336,500 shares, the Supervisory nil. The following table provides information on their share options:

Executive Board

Share Options	**2013** Number	Exercise price (in Euro)	**2012** Number	Exercise price (in Euro)
Number of options outstanding 1 January	**4,456,046**	**0.06**	**4,456,046**	**0.06**
Number of options granted	-	-	-	-
Number of options exercised	-	-	-	-
Number of options forfeited	-	-	-	-
Number expired	-	-	-	-
Number of options outstanding 31 December	**4,456,046**	**0.06**	**4,456,046**	**0.06**

In 2013 no additional share options were granted to the Executive Board. The share-based payment to the Executive board of Euro 340,000 comprises of the part of the share-based compensation (note 11 p. [•]) contributable to the share options granted in previous years.

Regular remunerations for 2013 include a total of Euro 33,000 (2012: 50,000) for the crisis levy payable for the amounts remunerated in 2013; this charge will be borne by the company.

Supervisory Board

Share Options	**2013** Number	Exercise price (in Euro)	**2012** Number	Exercise price (in Euro)
Number of options outstanding 1 January	**100,000**	**0.01**	**-**	**-**
Number of options granted	100,000	0.01	100,000	0.01
Number of options exercised	-	-	-	-
Number of options forfeited	-	-	-	-
Number expired	-	-	-	-
Number of options outstanding 31 December	**200,000**	**0.01**	**100,000**	**0.01**

There are no related party transactions which would need to be disclosed other than those described above.

25 Events after the balance sheet date

In May 2014, we raised new funding of Euro 26 million from our existing shareholders, from our development partners The Coca Cola Company, Danone and Alpla and from Swire Pacific Ltd. On 22 May 2014 all investors signed the investment documentation. The committed investments will be received ultimately 28 May 2014.

Furthermore the Euro 10.0 million subordinated convertible loan from existing shareholders plus Euro 1.2 million of accrued interest (Euro 0.7 million in 2013 and Euro 0.5 million in 2014) has been converted into equity ultimately on 22 May 2014.

INDEPENDENT AUDITOR'S REPORT

To: the general meeting of Avantium Holding B.V.

Report on the financial statements

We have audited the accompanying financial statements 2013 of Avantium Holding B.V., Amsterdam. The financial statements include the consolidated financial statements and the company financial statements. The consolidated financial statements comprise the consolidated balance sheet as at 31 December 2013, the consolidated statement of comprehensive income, changes in equity and cash flows for the year then ended and the notes, comprising a summary of significant accounting policies and other explanatory information. The company financial statements comprise the company balance sheet as at 31 December 2013, the company income statement for the year then ended and the notes, comprising a summary of accounting policies and other explanatory information.

Management Board's responsibility

The management board is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code, and for the preparation of the management board report in accordance with Part 9 of Book 2 of the Dutch Civil Code. Furthermore, the management board is responsible for such internal control as it determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the company's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the management board, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion with respect to the consolidated financial statements

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Avantium Holding B.V. as at 31 December 2013, and of its result and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil code.

Opinion with respect to the company financial statements

In our opinion, the company financial statements give a true and fair view of the financial position of Avantium Holding B.V. as at 31 December 2013, and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements

Pursuant to the legal requirement under Section 2:393 sub 5 at e and f of the Dutch Civil Code, we have no deficiencies to report as a result of our examination whether the management board report, to the extent we can assess, has been prepared in accordance with Part 9 of Book 2 of this Code, and whether the information as required under Section 2:392 sub 1 at b-h has been annexed. Further we report that the management board report, to the extend we can assess, is consistent with the financial statements as required by Section 2:391 sub 4 of the Dutch Civil Code.

The Hague, 22 May 2014

PricewaterhouseCoopers Accountants N.V.

Original has been signed by: J.A.D. van de Pavoordt RA

The above auditor's report is the original auditor's report that was issued on 22 May 2014 with respect to the financial statements for the period ending 31 December 2013. These financial statements also contained the report of the Executive and Supervisory board. For purposes of the Prospectus the report of the Executive and Supervisory board has been omitted.

ANNEX OVERVIEW OF PATENTS[196]

part I

Below is an overview of current patents and patent applications relating to Catalysis, YXY Technology and Renewable Chemistries, as well as an overview of patents to which Avantium has exclusive or non-exclusive rights. It contains information on the patent families, the patents that are included in each patent family, which patents are published and which are granted, where the patents are granted and the date thereof.

In the Netherlands, a patent application is generally published within a period of 18 months after the filing of the application thereto, after which the patent is generally granted as a so-called registration patent by the Dutch Patent Office as soon as possible. In the Netherlands, the time frame between the moment of publication and the moment of granting of the patent is usually limited. Whenever a patent application is published, this implies that the patent is visible in the relevant registers. At the moment of the publication of the application, the applicant already receives a provisional level of protection with respect to the rights on the invention. At the moment of publication of the patent application, the patent does not yet fully protect the intellectual property rights in relation to the invention. Such protection level is only achieved at the moment on which the patent has been granted (which is thus as soon as possible following the moment of publication of the application). In other countries, the patent application process may differ.

The duration of the application process is variable and depends on (*inter alia*) the country of application and whether or not third parties have opposed the application. On average, the approval process takes 4 to 10 years. Generally a patent is valid for 20 years after the filing date. Patents printed in bold have been granted.

<u>Catalysis</u>

Patent family	Published as (WO, EP, US)	Title	Filing date	Date of grant	Granted	Pending	Co-Applicant
1	WO02092219 **EP1392428** **US7531139**	System suitable for high throughput experimentation	13.05.02	EP 07.11.12 US 12.05.09	**CH, DE, DK, FI, FR, GB, NL**		
2	WO02092221 **EP1392429** **US7488452**	A system for performing experiments, in particular for high throughput experimentation	13.05.02	EP 01.10.08 US 10.02.09	**DE, DK, FR, GB, NL**		
3	WO02092220 **EP2263790** **US7625526**	Reactor assembly	13.05.02	EP 16.04.14 US 01.12.09	**CH, DE, DK, FI, FR, GB, NL, SG**		
4	WO2006107187 **EP1888224** **US7997297**	System and method for performing a chemical experiment	04.04.05	EP 09.12.15 US 16.08.11	**AU, BR, CA, CN, JP, KR, MX, MY, RU, SG, TW, ZA, CH, DE, DK, FI, FR, GB, NL**	IN	
5	**NL2002365** WO2009145614 EP2294491	Reaction assembly and flow splitter	26.05.08 26.05.09			EP, BR, IN	

196 [*Annex to be updated prior to approval as this is a working document*]

6	**NL2005476** WO2012047095 EP2624948 **US9080706**	System and method for measuring flow rates of fluid flows to parallel reactors	07.10.10 03.10.13	US 14.07.15	**CN**	EP, BR, IN	
7	**NL2009660** WO2014062056 **EP2908939** US20150273427	Pressure controller	18.10.12 11.10.13	EP 29.06.16	**CH, DE, DK, FI, FR, GB, NL**, **CN**	BR, IN, US	
8	**NL2009659** WO2014062055 **EP2908938** US2016121291	System and method for operating parallel reactors	18.10.12 11.10.13	EP 07.12-16	**CH, DE, DK, FI, FR, GB, NL**, **CN**	BR, IN, US	
9	**NL2011856** WO2015080572 EP3074121 US2016288081	Reactor system for high throughput applications	28.11.13 20.11.14			EP, BR, CN, IN, JP, KR, US	

YXY Technology[197,198]

Patent family	Published as (WO, EP, US)	Title	Filing date	Date of grant	Granted	Pending	Co-Applicant
1	WO2007104514	Method for the synthesis of 5-alkoxymethylfurfural ethers and their use	12.03.07		**EA (BY, RU)**, **AU**, **CA**, **CN**, **ID**, **IN**, **JP**, **KR**, **MX (2)**, **MY**, **NZ**, **SG**, **UA**, **VN**, **ZA**	BR	
	EP2004620			09.02.11	**BE, DE, FR, GB, LU, NL, CN, MX**	CA	
	EP2103606[199]			21.12.11	**BE, DE, FR, GB, LU, NL**		
	EP2565189[211]						
	US8133289			13.03.12			
	US8877950[4]			04.11.14			
	US8338626[211]			25.12.12			

[197] Patens printed bold have been granted.
[198] Generally, the patents related to the YXY Technology have been assigned to the Joint Venture and will be registered in the name of the Joint Venture . Certain exceptions exist for those patents covering a field in which Avantium remains active.
[199] Patent has been assigned to the Joint Venture, subject to an exclusive license for Avantium, and will be registered in the name of the Joint Venture.

2	WO2007104515	Method for the synthesis of 5-alkoxymethylfurfural esters and their use	12.03.07		**AU, CA, ID, MY, UA, ZA**	BR
	EP2001859			19.05.10	**BE, DE, FR, GB, LU, NL, CA**	
	EP2050742[211]			07.07.10	**BE, DE, FR, GB, LU, NL**	
	EP2105439[211]			19.10.11	**BE, DE, FR, GB, LU, NL**	
	US8242293[211]			14.08.12		
3	WO2009030505	Hydroxymethylfurfural ethers from HMF and olefins	05.09.08			
	EP2197865[211]			22.08.12	**DE, FR, GB, NL**	
4	WO2009030506	Hydroxymethylfurfural ethers from sugars or HMF and branched alcohols	05.09.08			
	EP2197867			02.03.16	**DE, FR, GB, NL**	
5	WO2009030507	Hydroxymethylfurfural ethers from sugars or HMF and higher alcohols	05.09.08			
	EP2197866			27.02.13	**DE, FR, GB, NL**	
6	WO2009030508	Hydroxymethylfurfural ethers from sugars or HMF and mixed alcohols	05.09.08		**EA (BY, RU), AU, CA, CN, MX, , UA, ZA**	BR
	EP2197868			27.04.11	**BE, DE, FR, GB, LU, NL**	
7	WO2009030509	5-substituted 2-(alkoxymethyl)furans	05.09.08		**EA (BY, RU), AU, CA, CN (2), JP, KR, MX (2), MY, SG, UA, VN, ZA**	BR, ID, IN
	EP2197863			07.11.12	**DE, FR, GB, NL**	
	EP2487170			18.02.15	**DE, FR, GB, NL**	

	US8231693			31.07.12		
8	WO2009030510	5-substituted methyl 2-methylfuran	05.09.08			
	EP2197862			22.02.12	**BE, DE, FR, GB, LU, NL**	
9	WO2009030511	Mixture of a furfural and 5-alkoxymethylfurfural derivatives from sugars and alcohols	05.09.08		**EA (BY, RU)**, **AU**, **CN**, **IN**, **JP**, **MX**, **MY**, **SG**, **UA**, **VN, ZA**	EP, BR, CA, ID,
	EP2195306					
	US8277521			02.10.12		
10	WO2009030512	Hydroxymethylfurfural ethers and esters prepared in ionic liquids	05.09.08			
	EP2183236[211]			16.02.11	**BE, DE, FR, GB, LU, NL**	
	US8314260[211]			20.11.12		
11	WO2009141166	Fuel composition	30.12.08			
	US8435313			07.05.13		
	US9145526			29.09.15		
12	WO2010077133	A process for preparing a polymer having a 2,5-furandicarboxylate moiety within the polymer backbone and such (co)polymers	30.12.08			EP, US
	EP2370496[200]					
	US2011282020[212]					
	US2016312008					
13	WO2011043660	Methods for the preparation of 2,5-furandicarboxylic acid and esters thereof	06.10.10		**CN**, **JP**, **MX**, **SG**, **MY**, **ZA**	CA, BR, ID, IN, KR, TH
	EP2486027[212]			04.06.14	**DE, FR, GB, NL**	
	US8519167[212]			27.08.13		

[200] Patent has been assigned to the Joint Venture and will be registered in the name of the Joint Venture.

14	WO2011043661	Methods for the preparation of 2,5-furandicarboxylic acid and for the preparation of the dialkylester of 2,5-furandicarboxylic acid	06.10.10		**CN**, **JP**, **MX**, **ZA**	EP, BR, CA, ID, IN, KR, MY, SG, TH	
	EP2486028[212]						
	US8865921[212]			21.10.14			
15	WO2012091570	Process for the conversion of a carbohydrate-containing feedstock	28.12.11		**CN, JP, MX, MY, SG**	BR, CA, ID, IN, KR, TH, ZA	
	EP2658849[212]			27.08.14	**DE, FR, GB, NL**		
	US9090581[212]			28.07.15			
16	WO2012091573[212]	Process for the depolymerization of a furan dicarboxylate containing polyester	29.12.11			CA	
	EP2658850[212]			09.03.16	**DE, FR, GB, NL**		
	US9073886[212]			07.07.15			
17	WO2013062408	Process for preparing a polymer product having a 2,5,-furandicarboxylic moiety within the polymer backbone to be used in bottle, film or fibre applications	24.10.12		**SG**, **ZA, CN**	EP, BR, CA, ID, IN, JP, KR, MX, MY, TH, US	
	EP2771382[212]						
	US2014336349[212]						
	US15/353,051 (div)						
18	**NL2006787**	Compounder and method for mixing one or more viscous fluids	16.05.11				
19	WO2013048248	Process for the preparation of a benzene derivate	28.09.12				Stichting Dienst Landbouwkundig Onderzoek Wageningen
	EP2760818			14.09.16	**DE, FR, GB, NL**		

	US9162960			20.10.15		
20	**NL2008047** WO2013100768	Process for carrying out a reaction involving a liquid reaction medium	28.12.11 27.12.12		EP, US	
	EP2797685[211]					
	US9434708[211]			06.09.16		
21	WO2014065657	Diels Alder reaction of furan derivatives with ethylene	22.10.12 22.10.13		EP, US	The Coca Cola Company
	EP2909155 US2016137579					
22	**NL2010572** WO2014163500	Process for the preparation of 2,5-furandicarboxylic acid	05.04.13 04.04.14		US	
	EP2981528[212]			30.11.16	BE, CH, DE, ES, FR, GB, IT, NL, TR	
	US2016024039[212]					
23	WO2014196861	Process for isomerizing glucose to fructose and for producing a fructoside-containing product	06.06.14		EP, BR, CA, CN, JP, KR, MX, MY, SG, US, ZA	
	EP3004126[211] US20160130292[211]					
24	WO2014204313 EP3011086[212] US2016138193[212]	Process for the preparation of a fibre, a fibre and a yarn made from such a fibre	20.06.14		EP, BR, CA, CN, ID, IN, JP, KR, MX, MY, SG, TH, US, ZA	
25	WO2015030590[212] EP3038997 US2016207898	Process for purifying an acid composition comprising 2-formyl-furan-5-carboxylic acid and 2,5-furandicarboxylic acid	29.08.14		BR, CA, CN, EP, JP, KR, MX, MY, SG, US, ZA	

26	WO2015059047[z] [12] EP3060598 US2016251479	Polyamides containing the biobased 2,5-FDCA	17.10.14	EP, US	
27	WO2015060718[z] [12] EP3060599 US2016237211	Process for preparing a furan-base polyamide, the polyamide so prepared and the oligomer	17.10.14	EP, US	
28	WO2015088341[z] [12] EP3080808 US2016376406	Composition comprising furfuryl alcohol	11.12.14	EP, US	
29	WO2015133902[z] [12] EP3114113 US2017008865	Process for the catalysed conversion of psicose into 5-HMF or an alkylether thereof	05.03.15	EP, US	
30	WO2015137807[z] [12] EP3116934 US15/122,694	Polyester and method for preparing such a polyester	11.03.15	AU, BR, CA, CN, EP, ID, IN, JP, KR, MY, SG, US, ZA	
31	WO2015137804[z] [12] EP3116931 US15/122,960	Method for preparing a polyester composition under specific esterification conditions	11.03.15	AU, BR, CA, CN, EP, ID, IN, JP, KR, MY, SG, US, ZA	
32	WO2015137806[z] [12] EP3116933 US2017015781	Process for enhancing the weight of a polyester composition	11.03.15	AU, BR, CA, CN, EP, ID, IN, JP, KR, MY, SG, US, ZA	
33	WO2015137805[z] [12] EP3116932 US2017015780	Polyester and method for preparing such a polyester	11.03.15	AU, BR, CA, CN, EP, ID, IN, JP, KR, MY, SG, US, ZA	
34	WO2015142181[z] [12] EP3119831 US15/127,596	Polyesters comprising 2,5-furandicarboxylic acids and saturated diol units having a high glass transition temperature	23.03.15	EP, US	Frères Roquette

35	WO2016032330[212]	Process for producing an oriented film comprising poly(ethylene-2,5-furandicarboxylate)	25.08.15	AU, CN, EP, JP, KR, US
36	WO2016076710[212]	Preparation of dialkylesters of 2,5-furandicarboxylic acid	10.11.15	
37	WO2016076711[212]	Preparation of dialkylester of 2,5-furandicarboxylic acid with low colour	10.11.15	
38	WO2016076712[212]	Process for purifying a crude composition of dialkyl ester of 2,5-furandicarboxylic acid	10.11.15	
39	WO2016130005[212]	Fuel compositions comprising humins	10.02.16	Progression Industry
40	WO2016190739	Process for the preparation of a fructose-rich form a solid comprising frcutose and glucose	27.05.16	
41	WO2016195499	Process for the preparation of a purified acid composition	05.06.16	
42	WO2016195500	FDCA purification by hydrolysis and hydrogenation	05.06.16	
43	WO2017003293	Process for the preparation of a furfural derivative	01.07.15	
44	WO2017003294	Process for the preparation of a furfural derivative comprising neutralizing an acid reaction mixture	01.07.15	

45	WO2017023173	Masterbatch polyester composition	04.08.15
46	WO2017023174	Polyester composition	04.08.15
47	WO2017023175	Poly(alkylene furandicarboxylate)-comprising polyester	04.08.15

Renewable Chemistries

Patent family	Published as (WO, EP, US)	Title	Filing date	Date of grant	Granted	Pending	Co-Applicant
1	WO2016099272	Process for the production of solid saccharides from an aqueous saccharide solution	18.12.14				
2	WO2016099273	Process for the preparation of a saccharide-containing solution from a torrified cellulosic biomass	18.12.14				
3	WO2016099274	Improved process for the preparation of a benzene compound	19.12.14				
4	WO2016114660	Process for preparing ethylene glycol from a carbohydrate source	13.01.16				
5	WO2016114658	Process for preparing ethylene glycol from a carbohydrate	13.01.16				
6	WO2016114659	Process for preparing ethylene glycol from a carbohydrate source	13.01.16				
7	WO2016114661	Continuous process for preparing ethylene glycol from a carbohydrate	13.01.16				

		source	
8	NL2014119	Process for preparing alkylene glycol from a carbohydrate	13.01.15
9	NL2014120	Process for preparing ethylene glycol from a carbohydrate	13.01.15
10	WO2016186504 [201]	Process for the preparation of an aromatic dicarboxylic acid	21.05.16
11	WO2016186505 [202]	Process for the purification of a carboxylic acid-containing composition	21.05.16

CO_2 Technology

Patent family	Published as (WO, EP, US)	Title	Filing Date	Granted	Pending	Co-Applicant
1	EP2598671	Reducing Carbon Dioxide to Products	30.01.13	**AU, CN**	BR, IN	
2	**US8845877**	Heterocycle Catalyzed Electrochemical Process	29.07.10			University of Princeton
	US2015/0047987	Heterocycle Catalyzed Electrochemical Process	17.09.14			University of Princeton
3	**US8721866**	Electrochemical Production of Synthesis Gas from Carbon Dioxide	29.07.10	**AU, CN**	BR, CA, IN, KR	
	EP2598670	Electrochemical Production of Synthesis Gas from Carbon Dioxide	30.01.13			
	US2014/0238871	Electrochemical Production of Synthesis Gas from Carbon	16.04.14			

[201] Partly assigned to the Joint Venture, registration of co-ownership is to follow in due time.
[202] Partly assigned to the Joint Venture, registration of co-ownership is to follow in due time.

		Dioxide			
4	**US8500987**	Purification of Carbon Dioxide from a Mixture of Gases	29.07.10		
	US9222179	Purification of Carbon Dioxide from a Mixture of Gases	21.06.13		
5	**US8524066**	Electrochemical Production of Urea from NOx and Carbon Dioxide	03.09.10		
6	**US8961774**	Electrochemical Production of Butanol from Carbon Dioxide and Water	30.11.11		
	US2015/0337444	Electrochemical Production of Butanol from Carbon Dioxide and Water	23.02.15		
7	**US8568581**	Heterocycle Catalyzed Carbonylation Hydroformylation with Carbon Dioxide	30.11.11		
	US9309599	Heterocycle Catalyzed Carbonylation and Hydroformylation with Carbon Dioxide	19.09.13		
8	**US9090976**	Advanced Aromatic Amine Heterocyclic Catalysts for Carbon Dioxide Reduction	30.12.11		
9	**US8658016**	Carbon Dioxide Capture and Conversion to Organic Products	05.07.12		
10	EP2729601	Reduction of Carbon Dioxide to Carboxylic Acids, Glycols, and Carboxylates	15.01.14		BR, CA, IN, KR
	US 8592633	Reduction of Carbon Dioxide	05.07.12		

		to Carboxylic Acids, Glycols, and Carboxylates		
11	**US 8845878**	Reducing Carbon Dioxide to Products	06.03.13	
12	**US 8858777**	Process and High Surface Area Electrodes for the Electrochemical Reduction of Carbon Dioxide	21.12.12	AU, CA, CN, IN, KR
	US2014/0367273	Process and High Surface Area Electrodes for the Electrochemical Reduction of Carbon Dioxide	28.08.14	
	EP2895642	Process and High Surface Area Electrodes for the Electrochemical Reduction of Carbon Dioxide	10.04.15	
13	US2015/0267309	High Pressure Electrochemical Cell and Process for the Electrochemical Reduction of Carbon Dioxide	12.03.15	
14	**US8641885**	Multiphase Electrochemical Reduction of CO2	21.12.12	
	US9175409	Multiphase Electrochemical Reduction of CO2	05.12.13	
15	**US9175407**	Integrated Process for Producing Carboxylic Acids from Carbon Dioxide	21.12.12	AU, BR, CA, CN, IN, JP, KR,
	EP2898117A1	Integrated Process for Producing Carboxylic Acids from Carbon Dioxide	31.03.15	
	US9085827	Integrated Process for Producing	03.07.13	

		Carboxylic Acids from Carbon Dioxide			
16	**US8647493**	Electrochemical Co-Production of Chemicals Employing the Recycling of a Hydrogen Halide	21.12.12		CA, IN, KR,
	EP2897908	Electrochemical Co-Production of Chemicals Employing the Recycling of a Hydrogen Halide	14.04.15		
	US2014/0124379	Electrochemical Co-Production of Chemicals Employing the Recycling of a Hydrogen Halide	10.01.14		
17	**US8845876**	Electrochemical Co-Production of Products with Carbon-Based Reactant Feed to Anode	21.12.12		CA, IN, KR
	EP2897907	Electrochemical Co-Production of Products with Carbon-Based Reactant Feed to Anode	01.04.15		
	US2014/0357904	Electrochemical Co-Production of Products with Carbon-Based Reactant Feed to Anode	19.08.14		
18	**US8845875**	Electrochemical Reduction of CO2 with Co-Oxidation of an Alcohol	21.12.12		AU, CA, CN, IN, KR
	EP2900847	Electrochemical Reduction of CO2 with Co-Oxidation of an Alcohol	31.03.15		
	US2014/0367274	Electrochemical Reduction of CO2 with Co-Oxidation of an Alcohol	27.08.14		
19	**US8692019**	Electrochemical Co-Production of Chemicals Utilizing a Halide	21.12.12		CA, IN, KR

		Salt		
	EP2897910	Electrochemical Co-Production of Chemicals Utilizing a Halide Salt	15.04.15	
20	**US8691069**	A Method and System for the Electrochemical Co-Production of Halogen and Carbon Monoxide for Carbonylated Products	21.12.12	CN
	EP2898118	A Method and System for the Electrochemical Co-Production of Halogen and Carbon Monoxide for Carbonylated Products	15.04.15	
	US2014/0194641	A Method and System for the Electrochemical Co-Production of Halogen and Carbon Monoxide for Carbonylated Products	10.03.14	
21	**US9303324**	Electrochemical Co-Production of Chemicals with Sulfur-Based Reactant Feeds to Anode	21.12.12	IN
	EP2897899	Electrochemical Co-Production of Chemicals with Sulfur-Based Reactant Feeds to Anode	01.04.15	
22	**US8821709**	System and Method for Oxidizing Organic Compounds While Reducing Carbon Dioxide	21.12.12	CA
	US2014/0034506	System and Method for Oxidizing Organic Compounds While Reducing Carbon Dioxide	25.09.13	

23	**US8444844**	Electrochemical Co-Production of a Glycol and an Alkene Employing Recycled Halide	21.12.12			
	US9080240	Electrochemical Co-Production of a Glycol and an Alkene Employing Recycled Halide	16.04.13			
24	EP2935654	Method and System for Production of Oxalic Acid and Oxalic Acid Reduction Products	17.06.15		CA	
	US9267212	Method and System for Production of Oxalic Acid and Oxalic Acid Reduction Products	20.03.14			
25	US2015/0218716	Reducing Carbon Dioxide to Products with an Indium Oxide Electrode	18.02.15		CA, CN, KR	University of Princeton
	EP2888775	Reducing Carbon Dioxide to Products with an Indium Oxide Electrode	06.03.15			University of Princeton
26	US2016/0017503	Method and System for Electrochemical Reduction of Carbon Dioxide Employing a Gas Diffusion Electrode	29.05.15			
	WO2015184388	Method and System for Electrochemical Reduction of Carbon Dioxide Employing a Gas Diffusion Electrode	29.05.15		JP, CA, EP	
27	WO2015195149	Integrated Process for Co-Production of Carboxylic Acids and Halogen Products from Carbon Dioxide	14.07.14		EP, US	

28	**US8562811**	System and Process for making Formic Acid	09.03.12

Part II

License rights

Below is an overview of patents and patent applications to which a member of the Group holds a license. It contains information on each patent family, including exemplary patent publications for each patent family, counterparts that are included in each patent family and information whether any patents are granted.

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Chevron Oronite Company LLC has granted members of the Group (Avantium and Avantium Technologies B.V.) a license, including the right to grant sublicenses, under the following patent rights:

Patent family	Published as (WO, EP, US)	Title	Filing date	Date of grant	Granted	Pending
1	**US7069203**	Method and system of product development process for chemical compositions using high volume modelling	31.10.03	US 27.06.06	**CA**, **CN**	
2	**US7468280**	High throughput preparation of lubricating oil compositions for combinatorial libraries	31.10.03	US 23.12.08	**CN**	CA, JP
3	**US7579192**	High throughput screening methods for lubricating oil compositions	31.10.03	US 25.08.09	**CN, JP**	CA
4	**US7648837**	High throughput screening methods for lubricating oil compositions	31.10.03	US 19.01.10	**CA**, **CN**	JP
5	**US7462490**	Combinatorial lubricating oil composition libraries	31.10.03	US 09.12.08	**CA**, **CN**	JP
6	**US7150182** **US7698929**	High throughput screening methods for lubricating oil compositions	31.10.03	US 19.12.08 US 20.04.10	**CN**	CA, JP
7	**US7985592**	High throughput screening methods for lubricating oil compositions	31.10.03	US 26.07.11	**CA**, **CN**	JP
8	**US7137289** **US7380441**	High throughput screening methods for lubricating oil	13.02.04 18.10.06	US 21.11.06 US	**CA**, **JP**	SG

		compositions		03.06.08		
9	**US8249816**	High throughput screening methods for fuel compositions	13.02.04	US 21.08.12	**CA**, **CN**, **JP**	
10	**US7306948** **US7611900**	High throughput screening methods for lubricating oil compositions	13.02.04 14.11.07	US 11.12.07 US 03.11.09	**CN**	JP

Procter & Gamble Company
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Patent family	Published as (WO, EP, US)	Title	Filing date	Date of grant	Granted	Pending
1	WO2013158582 **EP2763908** US2013270295	Plastic packages for dispensing a product in aerosol form having improved crazing resistance and sustainability	24.10.13	18.11.15	**CN**	JP, MX, US
2	WO2013158477 EP2838933 US2016113376	Plastic bottles for containing perfume compositions and having improved crazing resistance	24.10.13			EP, CN, JP, MX, US

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