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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 20-F

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2016

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number: 001-36515

MATERIALISE NV
(Exact name of Registrant as specified in its charter)

Not Applicable
(Translation of Registrant's name into English)

Kingdom of Belgium
(Jurisdiction of incorporation or organization)

Technologielaan 15, 3001 Leuven, Belgium
(Address of principal executive offices)

Peter Leys, telephone +32 (16) 39 66 11, facsimile +32 (16) 39 66 00, Technologielaan 15, 3001 Leuven, Belgium
(Name, Telephone, and E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
American Depositary Shares, each representing one Ordinary Share, no nominal value per share	**The NASDAQ Stock Market LLC**
Ordinary Shares, no nominal value per share*	**The NASDAQ Stock Market LLC**

* Not for trading but only in connection with the registration of the American Depositary Shares pursuant to the requirements of the Securities and Exchange Commission.

Securities registered or to be registered pursuant to Section 12(g) of the Act: None.

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None.

The number of outstanding shares of each of the issuer's classes of capital or common stock as of December 31, 2016 was: 47,325,438 Ordinary Shares

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☐ Yes ☒ No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. ☐ Yes ☒ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). ☐ Yes ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☒
Non accelerated filer	☐	Emerging growth company	☒

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ☐	International Financial Reporting Standards as issued by the International Accounting Standards Board ☒	Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. ☐ Item 17 ☐ Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act.). ☐ Yes ☒ No

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. ☐ Yes ☐ No

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INTRODUCTION

Except as otherwise required by the context, references to "Materialise," "Company," "we," "us" and "our" are to Materialise NV and its subsidiaries.

Our trademark portfolio contained 69 registered trademarks and 20 pending trademark applications as of December 31, 2016. All other trademarks or trade names referred to in this annual report are the property of their respective owners. Solely for convenience, the trademarks and trade names in this annual report are referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

All references in this annual report to "U.S. dollars" or "$" are to the legal currency of the United States and all references to "€" or "euro" are to the currency introduced at the start of the third stage of the European economic and monetary union pursuant to the treaty establishing the European Community, as amended.

On June 30, 2014, we sold 8,000,000 American Depositary Shares, or ADSs, each representing one ordinary share with no nominal value, or ordinary shares, in our initial public offering at a price of $12.00 per ADS. In connection with the closing our initial public offering, we converted our outstanding Class A ordinary shares, Class B ordinary shares and Class C ordinary shares into ordinary shares and effected a stock split of our outstanding ordinary shares, whereby each ordinary share was converted into four ordinary shares. The number of ordinary shares and number of shares issuable upon exercise of our outstanding warrants and conversion of our outstanding convertible bonds are presented herein on the basis of the number after this stock split.

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

This annual report includes certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, concerning our business, operations and financial performance and condition as well as our plans, objectives and expectations for our business operations and financial performance and condition. Any statements that are not of historical facts may be deemed to be forward-looking statements. You can identify these forward-looking statements by words such as "believes," "estimates," "anticipates," "expects," "plans," "intends," "may," "could," "might," "will," "should," "aims," or other similar expressions that convey uncertainty of future events or outcomes. Forward-looking statements appear in a number of places throughout this annual report and include statements regarding our intentions, beliefs, assumptions, projections, outlook, analyses or current expectations concerning, among other things, our intellectual property position, research and development projects, results of operations, cash needs, spending of the remaining net proceeds from our initial public offering, capital expenditures, financial condition, liquidity, prospects, growth and strategies, regulatory approvals and clearances, the markets and industry in which we operate and the trends and competition that may affect the markets, industry or us.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events, competitive dynamics and industry change, and depend on economic circumstances that may or may not occur in the future or may occur on longer or shorter timelines than anticipated. Although we believe that we have a reasonable basis for each forward-looking statement contained in this annual report, we caution you that forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. All of our forward-looking statements are subject to risks and uncertainties that may cause our actual results to differ materially from our expectations.

Actual results could differ materially from our forward-looking statements due to a number of factors, including, without limitation, risks related to:

- our ability to enhance and adapt our software, products and services to meet changing technology and customer needs;
- fluctuations in our revenue and results of operations;
- changes in volumes and patterns of customer electricity usage;
- our ability to operate in a highly competitive and rapidly changing industry;
- our ability to adequately increase demand for our products and services;

- our collaborations, in-licensing arrangements, joint ventures, strategic alliances or partnerships with third-parties;
- our dependence upon sales to certain industries;
- our relationships with suppliers;
- our ability to attract and retain senior management and other key employees;
- any disruptions to our service center operations, including by accidents, natural disasters or otherwise;
- our ability to raise additional capital on attractive terms, or at all, if needed to meet our growth strategy;
- our ability to adequately protect our intellectual property and proprietary technology;
- our international operations;
- our ability to comply with applicable governmental laws and regulations to which our products, services and operations are subject; and
- other risk factors as set forth under "Item 3. Key Information—D. Risk Factors."

Any forward-looking statements that we make in this annual report speak only as of the date of such statement, and we undertake no obligation to update such statements to reflect events or circumstances after the date of this annual report or to reflect the occurrence of unanticipated events. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless expressed as such, and should only be viewed as historical data. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this annual report. See "Item 10. Additional Information—H. Documents on Display."

You should also read carefully the factors described in "Item 3. Key Information—D. Risk Factors" and elsewhere in this annual report to better understand the risks and uncertainties inherent in our business and underlying any forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this annual report will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified timeframe, or at all.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. Selected Financial Data

The tables below contain a summary of our financial data as of and for years ended December 31, 2016, 2015, 2014, 2013 and 2012, which have been derived from our consolidated financial statements prepared in accordance with International Financial Reporting Standards, as issued by the International Accounting Standards Board, which we refer to as IFRS. Our consolidated financial statements and the related notes as of and for the years ended December 31, 2016, 2015 and 2014 appear elsewhere in this annual report.

Our historical results are not necessarily indicative of the financial results to be expected in any future periods. You should read this information in conjunction with our consolidated financial statements and related notes included elsewhere in this annual report, as well as the section entitled "Item 5. Operating and Financial Review and Prospects."

Consolidated Statements of Financial Position Data:

	As of December 31				
in 000€	2016	2015	2014	2013	2012
Inventory	7,870	5,387	3,660	3,328	3,487
Trade receivables	27,479	22,843	18,370	12,382	11,109
Cash and cash equivalents	55,912	50,726	51,019	12,598	6,417
Total assets	161,920	144,136	133,221	55,688	46,675
Total liabilities	82,887	61,181	48,054	37,953	33,338
Net assets(1)	79,033	82,955	85,167	17,735	13,337
Total equity	79,033	82,955	85,167	17,735	13,337

(1) Net assets represents total assets less total liabilities.

Consolidated Income Statements Data:

in 000€	For the year ended December 31				
	2016	2015	2014	2013	2012
Revenue	114,477	102,035	81,355	68,722	59,107
Cost of sales	(46,706)	(42,963)	(32,396)	(27,189)	(23,792)
Gross profit	**67,771**	**59,072**	**48,959**	**41,533**	**35,315**
Research and development expenses	(17,682)	(18,186)	(15,093)	(10,596)	(9,424)
Sales and marketing expenses	(36,153)	(36,832)	(27,543)	(22,360)	(19,768)
General and administrative expenses	(20,041)	(15,045)	(11,645)	(8,649)	(8,101)
Net other operating income (expenses)	6,212	7,102	5,652	4,492	4,089
Operating profit (loss)	**107**	**(3,889)**	**330**	**4,420**	**2,111**
Financial expenses	(2,437)	(2,470)	(1,150)	(1,260)	(1,049)
Financial income	2,039	3,511	3,160	273	512
Share in loss of a joint venture	(1,018)	(401)	(81)	—	—
Profit (loss) before taxes	**(1,309)**	**(3,249)**	**2,259**	**3,433**	**1,574**
Income taxes	(1,710)	389	(387)	(21)	(121)
Net profit (loss) of the year	**(3,019)**	**(2,860)**	**1,872**	**3,412**	**1,453**
Net profit (loss) attributable to:					
The owners of the parent	(3,019)	(2,807)	2,061	3,509	1,551
Non-controlling interest	—	(53)	(189)	(97)	(98)
Earnings per share attributable to the owners of the parent					
Basic	(0.06)	(0.06)	0.05	0.09	0.04
Diluted	(0.06)	(0.06)	0.05	0.09	0.04
Weighted average number of ordinary shares for basic earnings per share	47,325	47,224	43,118	37,840	37,724
Weighted average number of ordinary shares adjusted for effect of dilution	47,325	47,224	43,288	38,204	38,064
Consolidated Statements of Comprehensive Income Data:					
Net profit (loss)	(3,019)	(2,860)	1,872	3,412	1,453
Other comprehensive income (loss), net of taxes	(1,833)	624	126	(31)	(19)
Total comprehensive income (loss) for the year, net of taxes	(4,852)	(2,236)	1,998	3,381	1,434

Other Data (unaudited):

in 000€	For the year ended December 31				
	2016	2015	2014	2013	2012
Adjusted EBITDA (unaudited)(2)	9,458	3,687	5,752	7,610	5,023

(2) We calculate EBITDA as net profit plus income taxes, financial expenses (less financial income), depreciation and amortization, and share in loss of joint venture. We calculate Adjusted EBITDA by adding non-recurring initial public offering related expenses and non-cash stock-based compensation expenses to EBITDA. Disclosure in this prospectus of EBITDA and Adjusted EBITDA, which are non-IFRS financial measures, is intended as a supplemental measure of our performance that is not required by, or presented in accordance with, IFRS. EBITDA and Adjusted EBITDA should not be considered as alternatives to net profit or any other performance measure derived in accordance with IFRS. Our presentation of EBITDA and Adjusted EBITDA should not be construed to imply that our future results will be unaffected by unusual or non-recurring items. For additional information, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Other Financial Information." The following table reconciles net profit to EBITDA and Adjusted EBITDA for the periods presented:

	For the year ended December 31				
in 000€	2016	2015	2014	2013	2012
Net profit (loss)	(3,019)	(2,860)	1,872	3,412	1,453
Income taxes	1,710	(389)	387	21	121
Financial expenses	2,437	2,470	1,150	1,260	1,049
Financial income	(2,039)	(3,511)	(3,160)	(273)	(512)
Depreciation and amortization	8,374	6,810	4,565	3,190	2,911
Share in loss of joint venture	1,018	401	81	—	—
EBITDA (unaudited)	**8,481**	**2,921**	**4,895**	**7,610**	**5,022**
Non-recurring initial public offering expenses[a]	—	—	182	—	—
Non-cash stock-based compensation expenses[b]	977	766	675	—	—
Adjusted EBITDA (unaudited)	**9,458**	**3,687**	**5,752**	**7,610**	**5,022**

(a) Non-recurring initial public offering expenses represent fees and costs incurred in connection with our initial public offering.
(b) Non- cash stock-based compensation expenses represent the cost of equity-settled and cash-settled share-based payments to employees.

Exchange Rates

Our financial reporting currency is the euro. Fluctuations in the exchange rate between the euro and the U.S. dollar will affect the U.S. dollar amounts received by owners of the ADSs on conversion of dividends, if any, paid in euro on the ordinary shares and will affect the U.S. dollar price of the ADSs on the NASDAQ Global Select Market. The table below shows the period end, average, high and low exchange rates of U.S. dollars per euro for the periods shown. Average rates are computed by using the noon buying rate of the Federal Reserve Bank of New York for the euro on the last business day of each month during the relevant year indicated or each business day during the relevant month indicated. The rates set forth below are provided solely for your convenience and may differ from the actual rates used in the preparation of the consolidated financial statements included in this annual report and other financial data appearing in this annual report.

Year Ended December 31,	High	Low	Average	Year End
2012	1.3463	1.2062	1.2859	1.3186
2013	1.3816	1.2774	1.3284	1.3779
2014	1.3927	1.3927	1.3927	1.3927
2015	1.2015	1.0524	1.1096	1.0859
2016	1.1516	1.0375	1.1072	1.0552

Month	High	Low	Average	Period End
October 2016	1.1212	1.0866	1.1014	1.0962
November 2016	1.1121	1.0560	1.0792	1.0578
December 2016	1.0758	1.0375	1.0545	1.0552
January 2017	1.0794	1.0416	1.0635	1.0794
February 2017	1.0802	1.0551	1.0650	1.0618
March 2017	1.0882	1.0514	1.0691	1.0698
April 2017 (through April 21, 2017)	1.0758	1.0606	1.0657	1.0694

The noon buying rate of the Federal Reserve Bank of New York for the euro on April 21, 2017 was €1.00 = 1.0694.

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

Risks Relating to Our Business

We may not be able to maintain or increase the market share or reputation of our software and other products and services that they need to remain or become a market standard.

The additive manufacturing, or 3D printing, industry is rapidly growing on a global scale and is subject to constant innovation and technological change. A variety of technologies compete against one another in our market, which is driven, in part, by technological advances and end-user requirements and preferences, as well as by the emergence of new standards and practices. As the additive manufacturing market evolves, the industry standards that are adopted and adhered to are a function of the inherent qualities of the technology as well as the willingness of members of the industry to adopt them. To remain competitive, we depend in large part on our ability to increase and maintain market share and influence in the industry in order to be recognized as a market standard. Nonetheless, in the future, our influence in setting standards for the additive manufacturing industry may be limited and the standards adopted by the market may not be compatible with our present or future products and services.

We may not be successful in continuing to enhance and adapt our software, products and services in line with developments in market technologies and demands.

Our present or future software, products and services could be rendered obsolete or uneconomical by technological advances by one or more of our present or future competitors or by other technologies. Our ability to remain competitive will depend, in large part, on our ability to enhance and adapt our current software, product and services to developments in market technologies and demands and to enhance and develop new 3D printing software solutions, products and services. We believe that to remain competitive we must continuously enhance and expand the functionality and features of our products, services and technologies. However, there can be no assurance that we will be able to:

- maintain and enhance the market share of our current products, services and technologies;
- enhance our existing product, services and technologies;
- continue to leverage advances in 3D printing technology;
- develop new products, services and technologies that address the increasingly sophisticated and varied needs of prospective end-users;
- respond to technological advances and emerging industry standards and practices on a cost-effective and timely basis;
- develop products and services that are cost effective or that otherwise gain market acceptance; or
- adequately protect our intellectual property as we develop new products, services and technologies and anticipate intellectual property claims from third parties.

The research and development programs that we are currently engaged in, or that we may establish in the future, may not be successful and our significant investments in these programs may be lost.

To remain competitive, we currently, and we intend to continue to, invest significant amounts in various research and development programs. There can be no assurances, however, that these research and development programs will improve our existing additive manufacturing software solutions, products and services or create new software, products or services. Even if some of these programs are successful, it is possible that the new software, products or services developed from such programs will not be commercially viable, that new 3D printing technologies that we, or others, develop will eventually supplant our current 3D printing technologies, that changes in the manufacturing or use of 3D printers will adversely affect the need or demand for our software, products or services or that our competitors will create or successfully market 3D printing technologies that will replace our solutions, products and services in the market. As a result, any of our software solutions, products or services may be rendered obsolete or uneconomical and our significant investments in all or some of our research and development programs may be lost.

Existing and increased competition may reduce our revenue and profits.

The market segments in which we operate, Materialise Software, Materialise Medical and Materialise Manufacturing, are characterized by vigorous competition, by entry of competitors with innovative technologies, by consolidation of companies with complementary products, services and technologies, and by entry of large corporations in any one or more of our market segments.

In particular, the barriers to enter the software, medical and industrial markets with 3D printing solutions are decreasing rapidly.

In the Materialise Software segment, the availability of computing devices with continually expanding performance at progressively lower prices contributes to the ease of market entry. Additionally, there are certain open source software applications that are being offered free of charge or for a nominal fee that can place additional competitive pressure on us. In addition, 3D printer manufacturers, which closely work with their customers, may successfully bundle their own software solutions with their equipment, which may make our independent software solutions obsolete. In addition, companies that have greater financial, technical, sales and marketing and other resources, including market leaders with significant in-house capacities in software development, or existing computer-aided design, or CAD, software providers, may, at any point in time, enter the additive manufacturing market and very rapidly gain a significant share of the markets that we target.

In the Materialise Medical segment, medical device companies are investing in 3D printing solutions that may compete with our software solutions, products and services. Companies that initially rely on us to enter the additive manufacturing market for medical applications may, as they gain experience and as 3D printing technology gains strategic importance, decide to develop their own in-house solutions and enter the market themselves with their own software, products or services, thus becoming competitors and denying us continued access to their distribution channels.

In the Materialise Manufacturing segment, as additive manufacturing gains importance as a strategic technology, our customers are likely to bring 3D manufacturing in-house and reduce or even discontinue using our 3D printing services. In addition, competitors with more efficient or profitable business models, superior techniques or more advanced technologies may take market share away from us.

Because of these and other factors, competitive conditions in the industry are likely to intensify in the future. Increased competition could result in price reductions, reduced revenue and operating margins and loss of market share, any of which would likely harm our results of operations.

We rely on collaborations with users of our additive manufacturing solutions to be present in certain large scale markets and, indirectly, to expand into potentially high-growth specialty markets. Our inability to continue to develop or maintain these relationships in the future could harm our ability to remain competitive in existing markets and expand into other markets.

Our strategy includes entering into collaborations with our customers in certain large-scale markets and leveraging these collaborations to enter into other underserved specialty markets. For example, in the medical market, we have entered into collaborations with Zimmer Biomet Holdings, Inc. (previously Zimmer Holdings, Inc., which acquired Biomet, Inc. and changed its name to Zimmer Biomet Holdings, Inc.), or Zimmer Biomet, Encore Medical, L.P. (d/b/a DJO Surgical), or DJO Surgical, DePuy Synthes Companies of Johnson & Johnson, or DePuy Synthes, as well as with Global Orthopaedic Technology Pty Ltd, or Global Orthopaedic Technology, Limacorporate Spa, or Lima, Mathys AG, or Mathys, Howmedica Osteonics Corp., or Stryker, and Corin Ltd, or Corin. Increased adoption of our software, products and services, especially in potentially high-growth specialty markets, will depend in part on our

current and future collaborators' willingness to continue to adopt our additive manufacturing solutions in their markets and on our ability to continue to collaborate with these and other players. Certain of our customers that have initially relied on our 3D printing software and services have announced their intention to bring their 3D printing operations in-house and enter the market themselves, and other customers may also do so in the future as they gain experience and as 3D printing technology gains strategic importance, thus denying us continued access to their distribution channels. In addition, a change of control of any of our collaboration partners may negatively impact our relationship. If we are not able to maintain our existing collaborations and develop new collaborative relationships, our foothold in larger markets and expansion into potentially high-growth specialty markets could be harmed significantly.

Our revenue and results of operations may fluctuate.

Our revenue and results of operations may fluctuate from quarter-to-quarter and year-to-year and are likely to continue to vary due to a number of factors, many of which are not within our control. You should not rely on our past results as an indication of our future performance.

Fluctuations in our results of operations and financial condition may occur due to a number of factors, including, but not limited to, those listed below and those identified throughout this annual report:

- our ability to continue, renew or replace relationships with key customers;
- the degree of market acceptance of our software and our products;
- the mix of software, products and services that we sell during any period, as well as the mix of the various markets in which we make sales during said periods;
- a decline in new or renewed periodic licenses or maintenance contracts;
- delays in the introduction of new features;
- the entry of new competitors into our market;
- the development and degree of market acceptance of new competitive systems or processes by others;
- changes in our pricing policies or those of our competitors, including our responses to price competition;
- changes in the amount we spend in our marketing and other efforts;
- delays between our expenditures to develop, acquire or license new technologies and processes, and the generation of sales related thereto;
- the amounts we spend on, and the success rate of, our research and development activities;
- changes in the regulatory environment, including changes in regulatory laws and regulations and the interpretation thereof, applicable to our software programs, products or services;
- delays in obtaining regulatory approval for our software programs, products or services;
- interruptions to or other problems with our website and interactive user interface, information technology systems, manufacturing processes or other operations;
- general economic and industry conditions that affect end-user demand and end-user levels of product design and manufacturing, including the adverse effects of global economic uncertainties; and
- changes in accounting rules and tax laws.

Demand for additive manufacturing generally and our additive manufacturing software solutions, products and services in particular may not increase adequately.

The industrial and medical industries are generally dominated by conventional production methods with limited use of additive manufacturing technology in certain specific instances. If additive manufacturing technology, in particular but not limited to, for the production of end parts does not gain more mainstream market acceptance, or gains market acceptance at a significantly slower pace than currently expected, or if the marketplace adopts additive manufacturing based on a technology other than the technologies that we currently use or serve, we may not be able to meet our growth objectives or increase or sustain the level of sales of our additive manufacturing software solutions, products and services, and our results of operations would be adversely affected as a result.

We are dependent upon sales to certain industries.

Our revenue from products are currently relatively concentrated in the industrial and medical industries, and particularly in the automotive and orthopedic/cranio-maxillofacial segments within such industries, respectively. To the extent any of these industries experiences a downturn and we are unable to penetrate and expand in other industries, our results of operations may be adversely affected. Additionally, if any of these industries or their respective suppliers or other providers of manufacturing services develop new technologies or alternatives to manufacture the products that are currently manufactured using our 3D printing software, products and services, it may adversely affect our results of operations.

If our relationships with suppliers, including with limited source suppliers of consumables, were to terminate or our manufacturing arrangements were to be disrupted, our business could be adversely affected.

We purchase consumables and other components that are used in our production from third-party suppliers. We currently use only a limited number of suppliers for several of the consumables for our print materials. Our reliance on a limited number of vendors involves a number of risks, including:

- potential shortages of some key consumables or other components;
- printed material performance or quality shortfalls, if traceable to particular consumables or other components, since the supplier of the faulty consumable or component cannot readily be replaced;
- discontinuation of a consumable or other component on which we rely;
- potential insolvency of these vendors; and
- reduced control over delivery schedules, manufacturing capabilities, quality and costs.

If certain suppliers were to decide to discontinue production, or the supply to us, of a consumable or other component that we use, the unanticipated change in the availability of supplies, or unanticipated supply limitations, could cause delays in, or loss of, sales, increased production or related costs and, consequently, reduced margins, and damage to our reputation. In addition, because we use a limited number of suppliers, increases in the prices charged by our suppliers may have an adverse effect on our results of operations, as we may be unable to find a supplier who can supply us at a lower price. As a result, the loss of a limited source supplier could adversely affect our relationships with our customers and our results of operations and financial condition.

We depend on the knowledge and skills of our senior management and other key personnel, and if we are unable to retain and motivate them or recruit additional qualified personnel, our operations could suffer.

Our success depends upon the continued service and performance of our senior management and other key personnel, including engineers, designers, software developers and product managers, and our ability to identify, hire, develop, motivate and retain qualified personnel in the future. Competition for senior management and key employees in our industry is intense and we cannot guarantee that we will be able to retain our personnel or attract new, qualified personnel. We may need to invest significant amounts of cash and equity to attract and retain new employees and we may not realize returns on these investments. The loss of the services of members of our senior management or key employees could prevent or delay the implementation and completion of our strategic objectives, could divert management's attention to seeking certain qualified replacements or could adversely affect our ability to manage our company effectively. Each member of senior management as well as our key employees may resign at any time. Only some of the members of our senior management are subject to non-competition agreements, which may also be difficult to enforce. Accordingly, the adverse effect resulting from the loss of certain members of senior management or other key employees could be compounded by our inability to prevent them from competing with us. We do not carry key-man insurance on any member of our senior management team or other key personnel. If we lose the ability to hire and retain key executives and employees with a diversity and high level of skills in appropriate domains (such as research and development and sales), it could have a material adverse impact on our business activities and results of operations.

We may need to raise additional capital from time to time in order to meet our growth strategy and may be unable to do so on attractive terms, or at all.

We intend to continue to make investments to support the growth of our business and may require additional funds to respond to business challenges, including the need to implement our growth strategy, increase market share in our current markets or expand into other markets, or broaden our technology, intellectual property or service capabilities. Accordingly, we may require additional investments of capital from time to time, and our existing sources of cash and any funds generated from operations may not

provide us with sufficient capital. For various reasons, including any noncompliance with existing or future lending arrangements, additional financing, may not be available when needed, or may not be available on terms favorable to us. If we fail to obtain adequate capital on a timely basis or if capital cannot be obtained on terms satisfactory to us, we may not be able to achieve our planned rate of growth, which will adversely affect our results of operations.

Our international operations subject us to various risks, and our failure to manage these risks could adversely affect our results of operations.

We face significant operational risks as a result of doing business internationally, such as:

- fluctuations in foreign currency exchange rates;
- potentially longer sales and payment cycles;
- potentially greater difficulties in collecting accounts receivable;
- potentially adverse tax consequences, including liabilities imposed from inconsistent enforcement;
- challenges in providing solutions across a significant distance, in different languages and among different cultures;
- transportation delays;
- becoming subject to the different, complex and changing laws, regulations and court systems of multiple jurisdictions and compliance with a wide variety of foreign laws, treaties and regulations;
- reduced protection of, or significant difficulties in enforcing, intellectual property rights in certain countries;
- difficulties in staffing and managing foreign operations, particularly in new geographic locations;
- restrictions imposed by local labor practices and laws on our business and operations, including unilateral cancellation or modification of contracts;
- expropriation or nationalization of property;
- rapid changes in government, economic and political policies and conditions, political or civil unrest or instability, terrorism or epidemics and other similar outbreaks or events;
- operating in countries with a higher incidence of corruption and fraudulent business practices;
- seasonal reductions in business activity in certain parts of the world, particularly during the summer months in Europe;
- costs and difficulties of customizing products for foreign countries; and
- tariffs, trade barriers and other regulatory or contractual limitations on our ability to sell or develop our products in certain foreign markets.

We maintain important software research and development and engineering centers in Malaysia and Ukraine. In Malaysia, the government may exercise substantial control over certain sectors of the economy through regulation and state ownership. In Ukraine, the political and economic situation, in general, and the relations among Ukraine, United States, the European Union and Russia, in particular, remain unstable. We continue to monitor the situation in Ukraine and have a risk mitigation plan designed to limit the impact on our operations in case of escalation of the instability in that region. However, escalation could have a significant impact on our operations, in particular in the event where internet services would no longer be available in Ukraine or where the situation would become such that our employees would no longer be able to work from their homes. Our facility in Ukraine does not focus on sales to the Ukrainian market and mainly provides supporting activities for our global operations. Any material disruption of these supporting activities, however, could significantly impact our ability to further develop our products and to continue to service our customers globally. Moreover, changes in the laws and regulations of Malaysia or Ukraine, or in their interpretation or enforcement, including with respect to operations such as ours, which rely to a large extent on local private entrepreneurs, may significantly impact our activities in Malaysia or Ukraine, which would limit our future growth and adversely affect our results of operations. Our failure to manage the market and operational risks associated with our international operations effectively could limit the future growth of our business and adversely affect our results of operations.

Our international operations pose currency risks, which may adversely affect our results of operations and net income.

Our results of operations may be affected by volatility in currency exchange rates and our ability to effectively manage our currency transaction risks. In general, we conduct our business, earn revenue and incur costs in the local currency of the countries in which we operate. During the year ended December 31, 2016, approximately 68% of our revenue was generated, and approximately 61% of our total costs were incurred in, euros. As we continue to expand internationally, our exposure to currency risks will increase. Historically, we have not managed our foreign currency exposure in a manner that would eliminate the effects of changes in foreign exchange rates. Changes in exchange rates between the foreign currencies in which we do business and the euro will affect our revenue, cost of sales, and operating margins, and could result in exchange losses in any given reporting period.

Changes in tax laws, treaties or regulations could adversely affect our financial results.

Our future effective tax rates could be adversely affected by changes in tax laws, treaties and regulations, both internationally and domestically, including possible changes to the patent income deduction regime in Belgium or the way it proportionately impacts our effective tax rate. An increase of our future effective tax rates could have a material adverse effect on our business, financial position, results of operations and cash flows.

We may engage in acquisitions or investments that could disrupt our business, cause dilution to our shareholders and harm our financial condition and results of operations.

We have in the past and intend to continue to evaluate opportunities to acquire or invest in, companies that we believe have products, services, competencies or capabilities that are a strategic or commercial fit with any of our businesses or that otherwise offer opportunities for our company. For example, in 2015, we acquired Cenat BVBA, a provider of embedded computing software and solutions for additive manufacturing control systems based in Belgium and, in 2015, we also purchased the remaining 22.3% interest in Mobelife NV, to become the 100% owner of Mobelife NV. In connection with these acquisitions or investments, we may:

- issue ADSs or other forms of equity that would dilute our existing shareholders' percentage of ownership;
- incur debt and assume liabilities; and/or
- incur amortization expenses related to intangible assets or incur large and immediate write-offs.

If we complete an acquisition or investment, we cannot assure you that it will ultimately strengthen our competitive position or that it will be viewed positively by customers, suppliers, employees, financial markets or investors. Furthermore, future acquisitions or investments could pose numerous additional risks to our operations, including:

- problems integrating the purchased business, products, services or technologies;
- challenges in achieving strategic objectives, cost savings and other anticipated benefits;
- increases to our expenses;
- the assumption of significant liabilities that exceed the limitations of any applicable indemnification provisions or the financial resources of any indemnifying party;
- inability to maintain relationships with key customers, vendors and other business partners of our current or acquired businesses;
- diversion of management's attention from their day-to-day responsibilities;
- difficulty in maintaining controls, procedures and policies during the transition and integration;
- entrance into marketplaces where we have no or limited prior experience and where competitors have stronger marketplace positions;
- potential loss of key employees, particularly those of the acquired entity; and
- historical financial information may no longer be representative or indicative of our results as a combined company.

Alternatively, while certain acquisitions or investments may be of strategic importance for the execution of our business plan, we may not ultimately be able to complete such acquisitions or investments on favorable terms, or at all, which may in turn materially affect our ability to grow or even cause us to lose market share, and could have a material adverse effect on our business, financial condition and results of operations.

We may enter into collaborations, in-licensing arrangements, joint ventures, strategic alliances or partnerships with third parties that may not result in the development of commercially viable products or the generation of significant future revenue.

In the ordinary course of our business, we may enter into collaborations, in-licensing arrangements, joint ventures, strategic alliances or partnerships to develop proposed products or services and to pursue new markets. For example, in the Materialise Medical segment, we have established collaboration relationships with leading medical device companies for the development and distribution of our surgical planning software, services, and products, including with Zimmer Biomet, DJO Surgical, DePuy Synthes, Global Orthopaedic Technology, Lima and Mathys. Furthermore, in the Materialise Software segment, we have established a collaboration with Siemens PLM, or Siemens, and, in the Materialise Manufacturing segment, we have established a collaboration with HOYA Vision Care Company, or HOYA. Proposing, negotiating and implementing collaborations, in-licensing arrangements, joint ventures, strategic alliances or partnerships may be a lengthy and complex process. Other companies, including those with substantially greater financial, marketing, sales, technology or other business resources, may compete with us for these opportunities or arrangements. We may not succeed in maintaining, renewing or extending existing collaborations or in identifying, securing, or completing any such new

transactions or arrangements in a timely manner, on a cost-effective basis, on acceptable terms or at all. We may also not realize the anticipated benefits of any such transaction or arrangement. In particular, these collaborations may not result in the development of products or services that achieve commercial success or result in significant revenue and could be terminated prior to developing any products or services.

Additionally, we may not be in a position to exercise sole decision making authority regarding the transaction or arrangement, which could create the potential risk of creating impasses on decisions, and our collaboration partners may have economic or business interests or goals that are, or that may become, inconsistent with our business interests or goals. It is possible that conflicts may arise with our current or future collaboration partners, such as conflicts concerning the achievement of performance milestones, or the interpretation of terms under any agreement, such as those related to financial obligations or the ownership or license rights or control of intellectual property developed before or during the collaboration. If any conflicts arise with our current or future collaboration partners, they may act in their self-interest, which may be adverse to our best interest, and they may breach their obligations to us. In addition, we have limited control over the amount and timing of resources that our current collaboration partners or any future collaboration partners devote to our collaboration partners' or our future products or services. Disputes with our collaboration partners may result in litigation or arbitration that would increase our expenses and divert the attention of our management. Further, these transactions and arrangements are contractual in nature and may be terminated or dissolved under the terms of the applicable agreements and, in such event, we may not continue to have rights to the products or access to the markets relating to such transaction or arrangement or may need to purchase such rights at a premium.

Failure to comply with the U.S. Foreign Corrupt Practices Act or other applicable anti-corruption legislation could result in fines, criminal penalties and an adverse effect on our business.

We operate in a number of countries throughout the world, and are committed to doing business in accordance with applicable anti-corruption laws. We are subject, however, to the risk that our officers, directors, employees, agents and collaboration partners may take action determined to be in violation of such anti-corruption laws, including the U.S. Foreign Corrupt Practices Act of 1977, the U.K. Bribery Act 2010 and the Belgian Penal Code, as well as trade sanctions administered by the Office of Foreign Assets Control and the U.S. Department of Commerce. Any such violation could result in substantial fines, sanctions, civil and/or criminal penalties or curtailment of operations in certain jurisdictions, and might adversely affect our results of operations. In addition, actual or alleged violations could damage our reputation and ability to do business.

Errors or defects in our software or other products could cause us to incur additional costs, lose revenue and business opportunities, damage our reputation and expose us to potential liability.

Sophisticated software and complex 3D printed products may contain errors, defects or other performance problems at any point in the life of the product. If errors or defects are discovered in our current or future software or other products, we may not be able to correct them in a timely manner, or provide an adequate response to our customers. We may therefore need to expend significant financial, technical and management resources, or divert some of our development resources, in order to resolve or work around those defects. We may also experience an increase in our service and warranty costs. Particularly in the medical sector, errors or defects in our software or products could lead to claims by patients against us and our customers and expose us to lawsuits that may damage our and our customers' reputations. Claims may be made by individuals or by classes of users. Our product liability and related insurance policies may not apply or sufficiently cover any product liability lawsuit that arises from defective software or products. Customers such as our collaboration partners may also seek indemnification for third party claims allegedly arising from breaches of warranties under our collaboration agreements.

Errors, defects or other performance problems in our software or other products may also result in the loss of, or delay in, the market acceptance of our software, our products and related 3D printing or engineering services or postponement of customer deployment. Such difficulties could also cause us to lose customers and, particularly in the case of our largest customers, the potentially substantial associated revenue which would have been generated by our sales to companies participating in our customer's supply chain. Technical problems, or the loss of a customer with a particularly important global reputation, could also damage our own business reputation and cause us to lose new business opportunities.

We rely on our information technology systems to manage numerous aspects of our business and customer and supplier relationships, and a disruption of these systems could adversely affect our results of operations.

We rely on our information technology systems and databases to manage numerous aspects of our business and to provide analytical information to management. Our information technology systems allow us to, among other things, optimize our software development and research and development efforts, organize our in-house 3D printing services logistics, efficiently purchase products from our suppliers, provide other procurement and logistic services, ship and invoice products to our customers on a timely basis,

maintain cost-effective operations and generally provide service to our customers. Our information technology systems are an essential component of our business and growth strategies, and a disruption to our information technology systems could significantly limit our ability to manage and operate our business efficiently. Although we take steps to secure our information technology systems, including our computer systems, intranet and internet sites, email and other telecommunications and data networks, the security measures we have implemented may not be effective and our systems may be vulnerable to, among other things, damage and interruption from power loss, including as a result of natural disasters, computer system and network failures, loss of telecommunication services, operator negligence, loss of data, security breaches, computer viruses and other disruptive events. Any such disruption could adversely affect our reputation, brand and financial condition.

A breach of security in our products or computer systems may compromise the integrity of our products, harm our reputation, create additional liability and adversely impact our financial results.

We make significant efforts to maintain the security and integrity of our product source code and computer systems. The risk of a security breach or disruption, particularly through cyber attack or cyber intrusion, including by computer hackers, foreign governments and cyber terrorists, has increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. These threats include identity theft, unauthorized access, DNS attacks, wireless network attacks, viruses and worms, advanced persistent threat (APT), application centric attacks, peer-to-peer attacks, phishing, backdoor trojans and distributed denial of service (DDoS) attacks. Any of the foregoing could attack our products and computer systems. Despite significant efforts to create security barriers to such programs, it is virtually impossible for us to entirely eliminate this risk. Like all software products and computer systems, our software products and computer systems are vulnerable to such cyber attacks. The impact of cyber attacks could disrupt the proper functioning of our software products and computer systems, cause errors in the output of our or our customers' work, allow unauthorized access to sensitive, proprietary or confidential information of our company, our customers or the patients that we and our customers serve through our medical solutions. Moreover, as we continue to invest in new lines of products and services we are exposed to increased security risks and the potential for unauthorized access to, or improper use of, the information of our product and service users. If any of the foregoing were to occur, our reputation may suffer, customers may stop buying our products or services, we could face lawsuits and potential liability, and our results of operations could be adversely affected.

We rely on third party technology, platform, carriers, server and hardware providers, and a failure of service by these providers could adversely affect our business and reputation.

We rely upon a third party provider to host our main servers. If this provider is unable to handle current or higher volumes of use, experiences any interruption in operations or ceases operations for any reason or if we are unable to agree on satisfactory terms for a continued hosting relationship, we would be forced to enter into a relationship with other service providers or assume hosting responsibilities ourselves. If we are forced to switch hosting facilities, we may not be successful in finding an alternative service provider on acceptable terms or in hosting the computer servers ourselves. We may also be limited in our remedies against our third party hosting provider in the event of a failure of service. A failure or limitation of service or available capacity by our third party hosting provider could adversely affect our business and reputation.

Workplace accidents or environmental damage could result in substantial remedial obligations and damage to our reputation.

Accidents or other incidents that occur at our service centers and other facilities or involve our personnel or operations could result in claims for damages against us. In addition, in the event we are found to be financially responsible, as a result of environmental or other laws or by court order, for environmental damages alleged to have been caused by us or occurring on our premises, we could be required to pay substantial monetary damages or undertake expensive remedial obligations. The amount of any costs, including fines or damages payments that we might incur under such circumstances could substantially exceed any insurance we have to cover such losses. Any of these events, alone or in combination, could have a material adverse effect on our business, financial condition and results of operations and could adversely affect our reputation.

Our operations are subject to environmental laws and other government regulations that could result in liabilities in the future.

We are subject to local environmental laws and regulations governing our operations, including, but not limited to, emissions into the air and water and the use, handling, disposal and remediation of hazardous substances. A certain risk of environmental liability is inherent in our production activities. Under certain environmental laws, we could be held solely or jointly and severally responsible, regardless of fault, for the remediation of any hazardous substance contamination at our service centers and other facilities and the respective consequences arising out of human exposure to such substances or other environmental damage. We may not have been and may not be at all times in complete compliance with environmental laws, regulations and permits, and the nature of our operations exposes us to the risk of liabilities or claims with respect to environmental and worker health and safety matters. If we violate or fail to

comply with environmental laws, regulations and permits, we could be subject to penalties, fines, restrictions on operations or other sanctions, and our operations could be interrupted. The cost of complying with current and future environmental, health and safety laws applicable to our operations, or the liabilities arising from past releases of, or exposure to, hazardous substances, may result in future expenditures. Any of these developments, alone or in combination, could have a material adverse effect on our business, financial condition and results of operations.

If our service center operations are disrupted, sales of our 3D printing services, including the medical devices that we print, may be affected, which could have an adverse effect on our results of operations.

We have six 3D printing service centers in Europe, the United States and Asia, including our principal 3D printing service center located in Leuven, Belgium. If the operations of these facilities are materially disrupted, whether by fires or other industrial accidents, extreme weather, natural disasters, labor stoppages, acts of terror, or otherwise, we would be unable to fulfill customer orders for the period of the disruption, we would not be able to recognize revenue on orders, we could suffer damage to our reputation, and we might need to modify our standard sales terms to secure the commitment of new customers during the period of the disruption and perhaps longer. Depending on the cause of the disruption, we could incur significant costs to remedy the disruption and resume providing 3D printing services. Such a disruption could have an adverse effect on our results of operations.

We could experience unforeseen difficulties in building and operating key portions of our 3D printing infrastructure.

We have designed and built our own 3D printing operations, 3D printer platforms and other key portions of our technical infrastructure through which we serve our products and services, and we plan to continue to expand the size of our infrastructure through expanding our 3D printing facilities. The infrastructure expansion we may undertake may be complex, and unanticipated delays in the completion of these projects or availability of components may lead to increased project costs, operational inefficiencies, or interruptions in the delivery or degradation of the quality of our products. In addition, there may be issues related to this infrastructure that are not identified during the design and implementation phases, which may only become evident after we have started to fully utilize the underlying equipment, that could further degrade the user experience or increase our costs.

We may not have adequate insurance for potential liabilities, including liabilities arising from litigation.

In the ordinary course of business, we have been, and in the future may be, subject to various product and non-product related claims, lawsuits and administrative proceedings seeking damages or other remedies arising out of our commercial operations, including litigation related to defects in our software or other products. We maintain insurance to cover our potential exposure for a number of claims and losses. However, our insurance coverage is subject to various exclusions, self-retentions and deductibles, may be inadequate or unavailable to protect us fully, and may be cancelled or otherwise terminated by the insurer. Furthermore, we face the following additional risks related to our insurance coverage:

- we may not be able to continue to obtain insurance coverage on commercially reasonable terms, or at all, including with respect to our activities in the medical industry;
- we may be faced with types of liabilities that are not covered under our insurance policies, such as environmental contamination, terrorist attacks or alleged infringements of third parties' intellectual property rights, and that exceed any amounts that we may have reserved for such liabilities;
- the amount of any liabilities that we may face may exceed our policy limits; and
- we may incur losses resulting from the interruption of our business that may not be fully covered under our insurance policies.

Even a partially uninsured claim of significant size, if successful, could have a material adverse effect on our business, financial condition, results of operations and liquidity. However, even if we successfully defend ourselves against any such claim, we could be forced to spend a substantial amount of money in litigation expenses, our management could be required to spend valuable time defending these claims and our reputation could suffer, any of which could adversely affect our results of operations.

Current and future global economic uncertainties and political conditions may adversely affect our results of operations.

Our results of operations could be substantially affected not only by global economic conditions, but also by local operating and economic conditions, which can vary substantially by market. Unfavorable conditions can depress sales in a given market and may result in actions that adversely affect our margins, constrain our operating flexibility or result in charges that are unusual or

non-recurring. Certain macroeconomic events, such as the current adverse conditions in the global economy, including most recently with the market disruptions caused by the economic and political challenges facing China and Brazil and specific Eurozone countries such as Greece, Ireland, Italy, Portugal, and Spain, and the exit by the United Kingdom from the European Union (commonly referred to as "Brexit") could have a more wide-ranging and prolonged impact on the general business environment, which could also adversely affect us. These economic developments could affect us in numerous ways, many of which we cannot predict. We are unable to predict the likely duration and severity of the current disruption in financial markets and adverse economic conditions, or the effects these disruptions and conditions could have on us.

In addition, political and economic developments could also result in changes to legislation or reformation of government policies, rules and regulations, including in relation to tax and trade. Such changes could have a significant impact on our business by increasing the cost of doing business, affecting our ability to sell our software, products and services and negatively impacting our profitability. For example, as a result of the June 2016 Brexit referendum, the British government will begin negotiating the terms of the United Kingdom's future relationship with the European Union. Although it is unknown what those terms will be, it is possible that there will be greater restrictions on imports and exports between the United Kingdom and European Union countries and increased regulatory complexities. These changes may adversely affect our operations and financial results.

We face potential liability related to the privacy and security of personal information we collect.

In particular, but not exclusively, in connection with our Materialise Medical segment, we may have access to personal information that is subject to a number of U.S. federal and state, E.U. and other applicable foreign laws protecting the confidentiality of certain patient health or other private information, including patient records, and restricting the use and disclosure of that protected information.

In the United States, we are subject to the Health Insurance Portability and Accountability Act, or HIPAA, the Health Information Technology for Economic and Clinical Health Act of 2009, regulations issued pursuant to these statutes, state privacy and security laws and regulations. These statutes, regulations and contractual obligations impose numerous requirements regarding the use and disclosure of personal health information with which we must comply.

In the European Union, the Data Protection Directive, or DPD, imposes strict regulations and establishes a series of requirements regarding the storage of personally identifiable information on computers or recorded on other electronic media. This has been implemented by all E.U. member states through national privacy laws. DPD provides for specific regulations requiring all non-E.U. countries doing business with E.U. member states to provide adequate data privacy protection when receiving personal data from persons in any of the E.U. member states.

Although there are legal mechanisms to allow for the transfer of personal data from the E.U. to the U.S., in October 2015 the European Court of Justice invalidated the Safe Harbor framework and increased uncertainty around compliance with European Union restrictions on cross-border data transfers. As a result of the decision, it was no longer possible to rely on safe harbor certification as a legal basis for the transfer of personal data from the E.U. to entities in the U.S. On February 29, 2016, however, the European Commission announced an agreement with the United States Department of Commerce, or the DOC, to replace the invalidated Safe Harbor framework with a new E.U.-U.S. "Privacy Shield." On July 12, 2016, the European Commission adopted a decision on the adequacy of the protection provided by the Privacy Shield. The Privacy Shield is intended to address the requirements set out by the European Court of Justice in its ruling by imposing more stringent obligations on companies, providing stronger monitoring and enforcement by the DOC and Federal Trade Commission, and making commitments on the part of public authorities regarding access to information. U.S. companies have been able to certify to the DOC their compliance with the privacy principles of the Privacy Shield since August 1, 2016. The Privacy Shield, however, is currently being challenged in European courts. Adherence to the Privacy Shield is not, however, mandatory. U.S.-based companies are permitted to rely either on their adherence to the E.U.-U.S. Privacy Shield or on the other authorized means and procedures to transfer personal data provided by the DPD.

In December 2015, a proposal for an E.U. General Data Protection Regulation, intended to replace the current EU DPD, introducing new data protection requirements in the E.U., as well as substantial fines for breaches of the data protection rules, was agreed between the European Parliament, the Council of the European Union, and the European Commission. The EU General Data Protection Regulation entered into force on May 24, 2016 and will apply from May 25, 2018.

In addition, the use and disclosure of personal health and other private information is subject to regulation in other jurisdictions in which we do business or expect to do business in the future. Those jurisdictions may attempt to apply such laws extraterritorially or through treaties or other arrangements with European governmental entities. We might unintentionally violate such laws, such laws may be modified and new laws may be enacted in the future which may increase the chance that we violate them. For example, on May 25, 2018, the E.U. General Data Protection Regulation, or GDPR, will become effective and will replace all national privacy laws of the E.U. member states. The GDPR contains rules relating to the collection and processing of personal information, which are not identical to the current rules under national privacy laws and which contain more strict provisions. Any such developments, or developments stemming from enactment or modification of other laws, or the failure by us to comply with their requirements or to accurately anticipate the application or interpretation of these laws could create material liability to us, result in adverse publicity and negatively affect our medical business.

Our failure to accurately anticipate the application or interpretation of these statutes, regulations and contractual obligations as we develop our medical and other products and services, a failure by us to comply with their requirements (*e.g* ., evolving encryption and security requirements) or an allegation that defects in our medical or other products have resulted in noncompliance by our customers could create material civil and/or criminal liability for us, resulting in adverse publicity and negatively affecting our medical business. Any legislation or regulation in the area of privacy and security of personal information could affect the way we operate and could harm our business. The costs of compliance with, and the other burdens imposed by, these and other laws or regulatory actions may prevent us from selling our solutions or increase the costs associated with selling our products and services, and may affect our ability to invest in or jointly develop our products and services in the United States, the European Union and in foreign jurisdictions. Further, we cannot assure you that our privacy and security policies and practices will be found sufficient to protect us from liability or adverse publicity relating to the privacy and security of personal information.

Risks Related to Our Materialise Medical Segment and Regulatory Environment

Our medical business, financial condition, results of operations and cash flows could be significantly and negatively affected by substantial government regulations.

Our medical products are subject to rigorous regulation by the European Commission, the U.S. Food and Drug Administration, or the FDA, and numerous other applicable governmental authorities. In general, the development, testing, manufacturing and marketing of our medical products are subject to extensive regulation and review by numerous governmental authorities in the European Union, the United States and in other markets where we are currently active or may become active in the future. The regulatory process requires the expenditure of significant time, effort and expense to bring new medical products to market, and we cannot be certain that we will receive regulatory approvals, certifications or registrations in any country in which we plan to market our medical products. For example, the timing for bringing our medical products such as our innovative X-ray knee guide system and our patient specific devices such as our hip revision implants to certain key markets such as the United States, if at all, will depend to a large extent of the regulatory approvals.

The laws and regulations, including the requirements for approvals, certifications or registrations and the time required for regulatory review, vary from country to country. The regulatory approval process outside the European Union and the United States may include all of the risks associated with obtaining CE or FDA clearance or approval in addition to other risks. Clearance or approval by the FDA in the United States, or declaration of conformity assessment and affixing a CE mark in the EEA, does not ensure approval or certification by regulatory authorities in other countries, and approval or certification by one foreign regulatory authority does not ensure approval by regulatory authorities in other countries. We may be required to perform additional pre-clinical or clinical studies even if FDA clearance or approval, or the right to bear the CE label, has been obtained. We may not obtain regulatory approvals or certifications outside the European Union and the United States on a timely basis, if at all. If we fail to receive necessary approvals to commercialize our medical products in jurisdictions outside the European Union and the United States on a timely basis, or at all, our medical business, financial condition and results of operations could be adversely affected.

In addition, we are required to implement and maintain stringent reporting, labeling and record keeping procedures and make our facilities and operations subject to periodic inspections, both scheduled and unannounced, by the regulatory authorities. The medical device industry is also subject to a myriad of complex laws and regulations governing reimbursement, which varies from jurisdiction to jurisdiction in the European Union and which includes Medicare and Medicaid reimbursement in the United States as well as healthcare fraud and abuse laws, with these laws and regulations being subject to interpretation. In many instances, the industry does not have the benefit of significant regulatory or judicial interpretation of these laws and regulations. In certain public statements, governmental authorities have taken positions on issues for which little official interpretation was previously available. Some of these positions appear to be inconsistent with common practices within the industry but that have not previously been challenged.

Various governmental agencies have become increasingly vigilant in recent years in their investigation of various business practices. Governmental and regulatory actions against us can result in various actions that could adversely impact our medical operations, including:

- the recall or seizure of products;
- the suspension or revocation of the authority necessary for the production or sale of a product;
- the delay of our ability to introduce new products into the market;
- the suspension of shipments from particular manufacturing facilities;
- the issuance of warning letters or untitled letters;
- the imposition of operating restrictions;

- the imposition of injunctions;
- the imposition of fines and penalties;
- the exclusion of our products from being reimbursed by healthcare programs in the European Union or U.S. federal and state healthcare programs (such as Medicare, Medicaid, Veterans Administration health programs and Civilian Health and Medical Program of the Uniformed Services);
- the delay or denial of customs clearance of our products for import in certain jurisdictions; and
- other civil or criminal sanctions against us.

Failure to comply with applicable regulatory requirements could also result in civil actions against us and other unanticipated expenditures. Any of these actions, in combination or alone, or even a public announcement that we are being investigated for possible violations of these laws, could have a material adverse effect on our medical business, financial condition, results of operations and cash flows. If investigated, we cannot assure that the costs of defending or resolving those investigations or proceedings would not have a material adverse effect on our financial condition, results of operations and cash flows.

In many of the countries in which we market our medical products, we are subject to regulations affecting, among other things, clinical efficacy, product standards, packaging requirements, labeling requirements, import/ export restrictions, tariff regulations, duties and tax requirements. Many of the regulations applicable to our medical surgical guides, models, implants and software products in these countries are similar to those of the European Commission and the FDA. In addition, in many countries the national health or social security organizations require our medical products to be qualified before they can be marketed with the benefit of reimbursement eligibility. Failure to receive or delays in the receipt of relevant foreign qualifications also could have a material adverse effect on our medical business, financial condition, results of operations and cash flows.

As the government regulators in the European Union, United States and elsewhere have become increasingly stringent, we may be subject to more rigorous regulation by governmental authorities in the future.

Modifications to our medical products marketed in the United States may require new 510(k) clearances or premarket approvals, or may require us to cease marketing or recall the modified products until clearances are obtained.

Any modification to a 510(k)-cleared device that could significantly affect its safety or efficacy, or that would constitute a major change in its intended use, technology, materials, packaging and certain manufacturing processes, may require a new 510(k) clearance or, possibly, a premarket approval, or PMA. The FDA requires every manufacturer to make the determination regarding the need for a new 510(k) clearance or PMA in the first instance, but the FDA may (and often does) review the manufacturer's decision. The FDA may not agree with a manufacturer's decision regarding whether a new clearance or approval is necessary for a modification, and may retroactively require the manufacturer to submit a premarket notification requesting 510(k) clearance or an application for PMA. We have made modifications to our medical products in the past and may make additional modifications in the future that we believe did not or will not require additional clearances or approvals. No assurance can be given that the FDA would agree with any of our decisions not to seek 510(k) clearance or PMA. If the FDA requires us to cease marketing and recall the modified device until we obtain a new 510(k) clearance or PMA, our medical business, financial condition, results of operations and future growth prospects could be materially adversely affected. Further, our medical products could be subject to recall if the FDA determines, for any reason, that our products are not safe or effective. Any recall or FDA requirement that we seek additional approvals or clearances could result in significant delays, fines, increased costs associated with modification of a product, loss of revenue and potential operating restrictions imposed by the FDA.

Healthcare policy changes, including legislation to reform the U.S. healthcare system, could adversely affect us.

From time to time, legislation is drafted and introduced that could significantly change the statutory provisions governing the clearance or approval, manufacture and marketing of a medical device. In addition, regulations and guidance are often revised or reinterpreted in ways that may significantly affect our medical business and our medical products. It is impossible to predict whether legislative changes will be enacted or regulations, guidance or interpretations changed, and what the impact of such changes, if any, may be.

For instance, in 2010, the U.S. Patient Protection and Affordable Care Act, as amended by the U.S. Health Care and Education Reconciliation Act of 2010, or collectively, the PPACA, was enacted, which included, among other things, the following measures: an excise tax on any entity that manufactures or imports medical devices offered for sale in the United States; a Patient-Centered Outcomes Research Institute to oversee, identify priorities in and conduct comparative clinical effectiveness research; reporting and disclosure requirements on device manufacturers for any "transfer of value" made or distributed to prescribers and other healthcare providers,

effective March 30, 2013 (referred to as the Physician Sunshine Payment Act); payment system reforms including a national pilot program on payment bundling to encourage hospitals, physicians and other providers to improve the coordination, quality and efficiency of certain healthcare services through bundled payment models, beginning on or before January 1, 2013; and an independent payment advisory board that will submit recommendations to reduce Medicare spending if projected Medicare spending exceeds a specified growth rate. Some of the provisions of the PPACA have yet to be fully implemented, while certain provisions have been subject to U.S. judicial and Congressional challenges. In January 2017, Congress voted to adopt a budget resolution for fiscal year 2017, that while not a law, is widely viewed as the first step toward the passage of legislation that would repeal certain aspects of the PPACA. Further, on January 20, 2017, President Trump signed an Executive Order directing federal agencies with authorities and responsibilities under the PPACA to waive, defer, grant exemptions from, or delay the implementation of any provision of the PPACA that would impose a fiscal burden on states or a cost, fee, tax, penalty or regulatory burden on individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. Congress also could consider subsequent legislation to replace elements of the PPACA that are repealed. Thus, the full impact of the PPACA, any law replacing elements of it, and the political uncertainty surrounding any repeal or replacement legislation on our business remains unclear.

The excise tax described above was suspended on December 18, 2015 by the Consolidated Appropriations Act, 2016, which includes a two-year moratorium on the tax effective January 1, 2016 to December 31, 2017. We cannot predict what healthcare programs and regulations will be ultimately implemented at the U.S. federal or state level, or at the E.U. level or within the implementing legislation of the individual E.U. Member States, or the effect of any future legislation or regulation. However, these provisions as adopted could meaningfully change the way healthcare is delivered and financed, and may materially impact numerous aspects of our medical business. In particular, any changes that lower reimbursements or reduce medical procedure volumes could adversely affect our medical business and results of operations.

In addition, in the future there may continue to be additional proposals relating to the reform of the healthcare systems of the United States, the European Union, any individual Member State of the European Union or any other jurisdiction where we may operate. On June 14, 2016, the European lawmakers and regulators published the draft versions of the new Medical Device Regulations. If and when adopted, the new regulations will make major changes in the requirements for approval or clearance and compliance for all medical devices. Certain of these proposals could limit the prices we are able to charge for our medical products, or the amounts of reimbursement available for our medical products, and could limit the acceptance and availability of our medical products. The adoption of some or all of these proposals could have a material adverse effect on our financial position and results of operations.

Furthermore, initiatives sponsored by government agencies, legislative bodies and the private sector to limit the growth of healthcare costs, including price regulation and competitive pricing, are ongoing in markets where we do business. We could experience a negative impact on our results of operations due to increased pricing pressure in certain or all of the markets in which we operate. Governments, hospitals and other third-party payors could reduce the amount of approved reimbursements for our products. Reductions in reimbursement levels or coverage or other cost-containment measures could unfavorably affect our future results of operations.

Our financial performance may be adversely affected by medical device tax provisions in the health care reform laws.

The PPACA imposes a deductible excise tax equal to 2.3% of the sales price of a medical device on any entity that manufactures, produces or imports medical devices offered for sale in the United States, with limited exceptions, beginning in 2013. These taxes could have a material, negative impact on our results of operations and our cash flows. The excise tax has, however, been suspended on December 18, 2015 by the Consolidated Appropriations Act, 2016, which includes a two-year moratorium on the tax effective January 1, 2016 to December 31, 2017. Absent further legislative action, this excise tax will be automatically reinstated for medical device sales starting on January 1, 2018. We cannot predict if the suspension of this tax will be extended or if additional regulations will be implemented in a manner that could adversely affect us.

The use, including the misuse or off-label use, of our medical services and products may be deemed unauthorized use or improper promotion, which could harm our image in the marketplace or result in injuries that lead to product liability suits and could be costly to our business or result in regulatory sanctions.

Medical decisions may only be made and operations may only be executed by trained professionals who are authorized to do so in the jurisdictions in which they operate.

Our medical services and products are generally designed to support surgeons in the planning and performance of their operations. In our medical software products set up, training and engineering support, we make it very clear that responsibility for medical decisions rests exclusively with the responsible surgeon, who is responsible for carefully reviewing and explicitly approving the

surgical plan and/or the design of the medical device that is proposed by our software and engineers. Nonetheless, we cannot assure that patients, hospitals, surgeons or other parties will not try to hold us responsible for all or a part of the medical decisions underlying the operations that we support, exposing us to potential litigation or civil and criminal liability for unauthorized medical decision-making. Such actions or liability could lead governmental agencies to conclude that our products or services are used improperly, all of which could significantly damage our reputation and could materially impair the continued adoption of our medical services and product offering in the market.

In the markets in which we operate, our medical promotional materials and training methods must comply with numerous applicable laws and regulations, including the prohibition on the promotion of a medical device for a use that has not been cleared or approved by the relevant regulator or supervisory body. Use of a device outside of its cleared or approved indication is known as "off-label" use. If a relevant governmental authority determines that our medical promotional materials or training constitute promotion of an off-label use, it could request that we modify our training or promotional materials or subject us to regulatory or enforcement actions, including the issuance of an untitled letter, a warning letter, injunction, seizure, civil fine and criminal penalties. In that event, our reputation could be damaged and adoption of our medical products would be impaired. Although we train our sales force not to promote our medical products for off-label uses, and our instructions for use in all markets specify that our products are not intended for use outside of those indications cleared for use, competent regulatory agency could conclude that we have engaged in off-label promotion. In addition, there may be increased risk of injury if surgeons attempt to use our medical products off-label.

Surgeons also may misuse our medical products or use improper techniques if they are not adequately trained, potentially leading to injury and an increased risk of product liability. Product liability claims are expensive to defend and could divert our management's attention and result in substantial damage awards against us. Any of these events could adversely affect our medical business, results of operations and reputation and our ability to attract and retain customers for our products and services.

If our marketed medical devices are defective or otherwise pose safety risks, the relevant governmental authorities could require their recall, or we may initiate a recall of our products voluntarily.

The relevant governmental authorities may require the recall of commercialized products in the event of material deficiencies or defects in design or manufacture or in the event that a product poses an unacceptable risk to health. Manufacturers, on their own initiative, may recall a product if any material deficiency in a device is found. A government mandated or voluntary recall could occur as a result of an unacceptable risk to health, component failures, manufacturing errors, design or labeling defects or other deficiencies and issues. Recalls of any of our medical products would divert managerial and financial resources and have an adverse effect on our financial condition and results of operations. Any recall could impair our ability to produce our medical products in a cost-effective and timely manner in order to meet our customers' demands. We also may be required to bear other costs or take other actions that may have a negative impact on our future revenue and our ability to generate profits. We may initiate voluntary recalls involving our medical products in the future that we determine do not require notification of the relevant regulatory body. If a governmental agency disagrees with our determinations, they could require us to report those actions as recalls. A future recall announcement could harm our reputation with customers and negatively affect our revenue. In addition, the relevant authority could take enforcement action for failing to report the recalls when they were conducted.

If our Materialise Medical segment products cause or contribute to a death or a serious injury, or malfunction in certain ways, we will be subject to medical device reporting regulations, which can result in voluntary corrective actions or agency enforcement actions.

Under the FDA medical device reporting regulations, or MDR, we are required to report to the FDA any incident in which our medical product has malfunctioned and would be likely to cause or contribute to a death or serious injury if the malfunction happened again. If we fail to report these events to the FDA within the required timeframes, or at all, the FDA could take enforcement action against us. Any adverse event involving our medical products could result in future voluntary corrective actions, such as recalls or customer notifications, or agency action, such as inspection, mandatory recall or other enforcement action. Any corrective action, whether voluntary or involuntary, as well as defending ourselves in a lawsuit, will require the dedication of our time and capital, distract management from operating our business, and may harm our reputation and financial results.

In the European Economic Area, we must comply with the E.U. Medical Device Vigilance System, the purpose of which is to improve the protection of health and safety of patients, users and others by reducing the likelihood of reoccurrence of incidents related to the use of a medical device. Under this system, incidents must be reported to the competent authorities of the Member States of the European Economic Area. An incident is defined as any malfunction or deterioration in the characteristics and/or performance of a device, as well as any inadequacy in the labeling or the instructions for use which, directly or indirectly, might lead to or might have led to the death of a patient or user or of other persons or to a serious deterioration in their state of health. Incidents are evaluated by the European Economic Area competent authorities to whom they have been reported, and where appropriate, information is disseminated between them in the form of National Competent Authority Reports, or NCARs. The E.U. Medical Device Vigilance System is further intended to facilitate a direct, early and harmonized implementation of Field Safety Corrective Actions, or FSCAs, across the Member States of the European Economic Area where the device is in use. An FSCA is an action taken by a manufacturer to reduce a risk of death or serious deterioration in the state of health associated with the use of a medical device that is already placed on the market. An FSCA may include the recall, modification, exchange, destruction or retrofitting of the device. FSCAs must be communicated by the manufacturer or its legal representative to its customers and/or to the end users of the device through Field Safety Notices.

Our Materialise Medical segment's 3D printing operations are required to operate within a quality management system that is compliant with the regulations of various jurisdictions, including the requirements of ISO 13485, and the U.S. Quality System Regulation, which is costly and could subject us to enforcement action.

We are subject to the regulations of various jurisdictions regarding the manufacturing process for our medical products, including the requirements of ISO 13485. Within the United States, we are required to comply with the Quality System Regulation, which covers, among other things, the methods of documentation of the design, testing, production, control, quality assurance, labeling, packaging, sterilization, storage and shipping of our medical products. Compliance with these regulations is costly and time-consuming. In addition, the FDA enforces the U.S. Quality System Regulation through periodic announced and unannounced inspections of manufacturing facilities. The failure by a manufacturer to comply with applicable statutes and regulations administered by the FDA and other regulatory bodies, or the failure to timely and adequately respond to any adverse inspectional observations or product safety issues, could result in, among other things, any of the following enforcement actions:

- untitled letters, warning letters, fines, injunctions, consent decrees and civil penalties;
- customer notifications or repair, replacement, refunds, recall, detention or seizure of our medical products;
- operating restrictions or partial suspension or total shutdown of production;
- refusing or delaying requests for 510(k) clearance or PMA of new products or modified products;
- withdrawing 510(k) clearances or PMAs that have already been granted;
- refusal to grant export approval for our medical products; or
- criminal prosecution.

Any of these actions could impair our ability to produce our medical products in a cost-effective and timely manner in order to meet our customers' demands. We also may be required to bear other costs or take other actions that may have a negative impact on our future revenue and our ability to generate profits. Furthermore, our key component suppliers may not currently be or may not continue to be in compliance with all applicable regulatory requirements, which could result in our failure to produce our medical products on a timely basis and in the required quantities, if at all.

We may be subject to or otherwise affected by U.S. federal and state, European or other healthcare laws, including fraud and abuse and health information privacy and security laws, and could face substantial penalties if we are unable to fully comply with such laws.

Healthcare regulation by U.S. federal and state, European or other governments could significantly impact our medical business. Healthcare fraud and abuse and health information privacy and security laws potentially applicable to our medical operations include:

- the U.S. federal Anti-Kickback Law, which constrains our marketing practices and those of our independent sales agencies, educational programs, pricing, bundling and rebate policies, grants for physician-initiated trials and continuing medical education, and other remunerative relationships with healthcare providers, by prohibiting, among other things, soliciting, receiving, offering or providing remuneration, intended to induce the purchase or recommendation of an item or service reimbursable under a U.S. federal healthcare program, such as the Medicare or Medicaid programs;
- U.S. federal false claims laws which prohibit, among other things, knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent;
- HIPAA, and its implementing regulations, which created federal criminal laws that prohibit executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters and which also imposes certain regulatory and contractual requirements regarding the privacy, security and transmission of individually identifiable health information;
- U.S. state laws analogous to each of the above federal laws, such as anti-kickback and false claims laws that may apply to items or services reimbursed by any third-party payor, including commercial insurers, and state laws governing the privacy and security of certain health information, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts; and

- similar foreign laws and regulations governing healthcare fraud and abuse, patient data privacy, interactions with healthcare professionals and related laws and regulations that apply to us in the countries in which we operate.

If our past or present operations are found to be in violation of any of such laws or any other governmental regulations that may apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from U.S. federal healthcare programs and the curtailment or restructuring of our operations. Similarly, if the healthcare providers or entities with whom we do business are found to be non-compliant with applicable laws, they may be subject to sanctions, which could also have a negative impact on us. Any penalties, damages, fines, curtailment or restructuring of our operations could adversely affect our ability to operate our medical business and our financial results. The risk of our company being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Further, the PPACA, among other things, amends the intent requirement of the U.S. federal anti-kickback and criminal health care fraud statutes. A person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. In addition, the PPACA provides that the government may assert that a claim including items or services resulting from a violation of the U.S. federal anti-kickback statute constitutes a false or fraudulent claim for purposes of the false claims statutes. Any action against us for violation of these laws, even if we successfully defend against them, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business.

Risks Related to Our Intellectual Property

If we are unable to obtain patent protection for our products or otherwise protect our intellectual property rights, our business could suffer.

We rely on a combination of patents, copyrights, trademarks, trade secrets, confidentiality and other contractual arrangements with our employees, end-users and others to maintain our competitive position. Our success depends, in part, on our ability to obtain patent protection for or maintain as trade secrets our proprietary products, technologies and inventions and to maintain the confidentiality of our trade secrets and know-how, operate without infringing upon the proprietary rights of others and prevent others from infringing upon our business proprietary rights.

Despite our efforts to protect our proprietary rights, it is possible that competitors or other unauthorized third parties may obtain, copy, use or disclose or otherwise circumvent our technologies, software, inventions, processes or improvements. We cannot assure you that any of our existing or future patents or other intellectual property rights will be enforceable, will not be challenged, invalidated or circumvented, or will otherwise provide us with meaningful protection or any competitive advantage. In addition, our pending patent applications may not be granted, and we may not be able to obtain foreign patents or elect to file applications corresponding to our U.S., E.U. or other patents. We intend to expand our business to certain countries that may not provide the same level of patent or other intellectual property protection as the United States and the European Union. Even if we assert our patents or obtain additional patent or similar protection in such countries, effective enforcement of such patents or other rights may not be available. If our patents do not adequately protect our technology, our competitors may be able to offer products or services similar to ours or potential customers may gain illegal access to our proprietary technology. Our competitors may also be able to develop similar technology independently or design around our patents, and we may not be able to detect the unauthorized use of our proprietary technology or take appropriate steps to prevent such use. Any of the foregoing events would lead to increased competition and lower revenue or gross margins, which could adversely affect our results of operations.

Moreover, several recent changes to the U.S. patent laws may impact our ability to obtain and enforce our intellectual property rights. For example, the Leahy-Smith America Invents Act, or the AIA, includes a number of significant changes to U.S. patent law, including provisions that affect the way patent applications will be prosecuted and may also affect patent litigation. The U.S. Patent and Trademark Office, or USPTO, recently developed new regulations and procedures to govern administration of the AIA, and many of the substantive changes to patent law associated with the AIA, and in particular, the first to file provisions, only became effective on March 16, 2013. Accordingly, it is not clear what, if any, impact the AIA will have on the operation of our business. In addition, in recent years, the courts have interpreted U.S. patent laws and regulations differently, and in particular the U.S. Supreme Court has decided a number of patent cases and continues to actively review more patent cases than it has in the past. Some of these changes or potential changes may not be advantageous for us, and may make it more difficult to obtain adequate patent protection or to enforce our patents against parties using them without a license or payment of royalties. These changes could increase the costs and uncertainties surrounding the prosecution of our patent applications and the enforcement or defense of our patent rights, all of which could have a material adverse effect on our business and financial condition.

We may not be able to protect our trade secrets and intellectual property.

While some of our technology is licensed under patents belonging to others or is covered by process patents which are owned or applied for by us, much of our technology is not protected by patents. Furthermore, patents are jurisdictional in nature and therefore only protect us in certain markets, rather than globally. We have devoted substantial resources to the development of our technology, trade secrets, know-how and other unregistered proprietary rights. While we enter into confidentiality and invention assignment agreements intended to protect such rights, such agreements can be difficult and costly to enforce or may not provide adequate remedies if violated. Such agreements may be breached and confidential information may be willfully or unintentionally used or disclosed in violation of the agreements, or our competitors or other parties may learn of the information in some other way. We cannot legally prevent one or more other companies from developing similar or identical technology to our unpatented technology and accordingly, it is likely that, over time, one or more other companies may be able to replicate our technology, thereby reducing our technological advantages. If we do not protect our technology or are unable to develop new technology that can be protected by patents or as trade secrets, we may face increased competition from other companies, which may adversely affect our results of operations.

We may incur substantial costs enforcing or acquiring intellectual property rights and defending against third-party claims as a result of litigation or other proceedings.

In connection with the enforcement of our intellectual property rights, opposing third parties from obtaining patent rights or disputes related to the validity or alleged infringement of our or third-party intellectual property rights, including patent rights, we have been and may in the future be subject or party to claims, negotiations or complex, protracted litigation.

While we strive to avoid infringing the intellectual property rights of third parties, we cannot provide any assurances that we will be able to avoid any claims that our products and technology, including the technology that we license from others, infringe the intellectual property rights of third parties. Patent applications in the United States and most other countries are confidential for a period of time until they are published, and the publication of discoveries in scientific or patent literature typically lags actual discoveries by several months or more. As a result, the nature of claims contained in unpublished patent filings around the world is unknown to us, and we cannot be certain that we were the first to conceive inventions covered by our patents or patent applications or that we were the first to file patent applications covering such inventions. Furthermore, it is not possible to know in which countries patent holders may choose to extend their filings under the Patent Cooperation Treaty or other mechanisms. Moreover, the patent landscape in the field of 3D printing is very complex and freedom to operate examinations are costly and time-consuming. We have not obtained extensive freedom to operate reports in the past for each and all of our products and services, nor do we intend to install on a general basis freedom to operate examinations for our future products and services. In addition, we may be subject to intellectual property infringement claims from individuals, vendors and other companies, including those that are in the business of asserting patents, but are not commercializing products or services in the field of 3D printing, or our customers may seek to invoke indemnification obligations to involve us in such intellectual property infringement claims. Furthermore, although we maintain certain procedures to help to ensure that the items we 3D print on behalf of customers do not infringe upon the intellectual property rights of others, we cannot be certain that our procedures will be effective in preventing any such infringement.

Intellectual property disputes and litigation, regardless of the merit or resolution, could cause us to incur significant costs in enforcing, or responding to, defending and resolving such claims. In addition, such claims can be costly and disruptive to our business operations by diverting attention and energies of management and key technical personnel, by prohibiting or otherwise impairing our ability to commercialize new or existing products or services and by increasing our costs of doing business. We may not prevail in any such dispute or litigation, and an adverse decision in any legal action involving intellectual property rights, including any such action commenced by us, could limit the scope of our intellectual property rights and the value of the related technology. Third-party claims of intellectual property infringement successfully asserted against us may require us to redesign infringing technology or enter into costly settlement or license agreements on terms that are unfavorable to us, prevent us from manufacturing or licensing certain of our products, subject us to injunctions restricting our sale of products and use of infringing technology, cause severe disruptions to our operations or the markets in which we compete, impose costly damage awards or require indemnification of our sales agents and end-users. In addition, as a consequence of such claims, we may incur significant costs in acquiring the necessary third-party intellectual property rights for use in our products and services or developing non-infringing substitute technology. Any of the foregoing developments may have a material adverse effect on our business, financial condition and results of operations.

Obtaining and maintaining our patent protection depends on compliance with various procedural, documentary, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to governmental patent agencies, including the USPTO in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an

inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we or our licensors fail to maintain the patents and patent applications covering our products and processes, our competitive position could be adversely affected.

We may be subject to claims that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

Certain of our past and present employees were previously employed at other companies, including our competitors or potential competitors. Some of these employees executed proprietary rights, non-disclosure and non-competition agreements in connection with such previous employment. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. We are not aware of any threatened or pending claims related to these matters, but in the future litigation may be necessary to defend against such claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable personnel or intellectual property rights. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management.

If disputes arise, we could lose rights that are important to our business or be subject to restrictions on the conduct of our business.

We have license agreements with respect to certain intellectual property that is important to our business and that may include exclusivity and non-competition undertakings. For example, we have an arrangement with Materialise Dental NV, the entity that resulted from the spinoff of our former dental related business and was acquired by a third party, that distinguishes the dental business that Materialise Dental NV now pursues from the businesses, such as Cranio-Maxio Facial, or CMF, that we continue to pursue following the sale. Disputes may arise between the counterparties to these agreements and us that could result in termination of these agreements. If we fail to comply with our obligations under our intellectual property-related agreements, or misconstrue the scope of the rights granted to us or restrictions imposed on us under these agreements, the counterparties may have the right to terminate these agreements or sue us for damages or equitable remedies, including injunctive relief. Termination of these agreements, the reduction or elimination of our rights under these agreements, or the imposition of restrictions under these agreements that we have not anticipated may result in our having to negotiate new or reinstated licenses with less favorable terms, or to cease commercialization of licensed technology and products. This could materially adversely affect our business.

Certain technologies and patents have been developed with collaboration partners and we may face restrictions on this jointly developed intellectual property.

We have entered into collaborations with a number of industrial and medical device companies, including Zimmer-Biomet, DJO Surgical, DePuy Synthes, Global Orthopaedic Technology, Lima, Mathys, Siemens and HOYA. We have, in some cases individually and in other cases along with our collaboration partners, filed for patent protection for a number of technologies developed under these agreements and may in the future file for further intellectual property protection and/or seek to commercialize such technologies. Under some of these agreements, certain intellectual property developed by us and the relevant partner may be subject to joint ownership by us and the partner and our commercial use of such intellectual property may be restricted, or may require written consent from, or a separate agreement with, the partner. In other cases, we may not have any rights to use intellectual property solely developed and owned by the partner. If we cannot obtain commercial use rights for such jointly-owned intellectual property or partner-owned intellectual property, our future product development and commercialization plans may be adversely affected. For additional information, see "Item 4. Information on the Company—B. Business Overview—Intellectual Property."

Our use of open source software may expose us to additional risks and harm our intellectual property.

Some of our proprietary software, including some of our 3D printing software, may use or incorporate open source software. Some open source software licenses require users who distribute open source software as part of their own software product to publicly disclose all or part of the source code to such software product or make available any derivative works of the open source code on unfavorable terms or at no cost. We monitor, on an ongoing basis, whether our proprietary software, including that in our 3D printing software, would make use of any open source software that could require us to disclose our proprietary source code, which could adversely affect our business.

Risks Related to the ADSs

The ADSs may experience price and volume fluctuations.

The stock market generally has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of listed companies. Broad market and industry factors may negatively affect the market price of the ADSs, regardless of our actual operating performance. The market price and liquidity of the market for the ADSs may be higher or lower than the price you paid and may be significantly affected by numerous factors, some of which are beyond our control. These factors include:

- significant volatility in the market price and trading volume of securities of companies in our sector, which is not necessarily related to the operating performance of these companies;
- the mix of products that we sell, and related services that we provide, during any period;
- delays between our expenditures to develop and market new products and the generation of sales from those products;
- changes in the amount that we spend to develop, acquire or license new products, technologies or businesses;
- changes in our expenditures to promote our products and services;
- success or failure of research and development projects of us or our competitors;
- announcements of acquisitions by us or one of our competitors;
- the general tendency towards volatility in the market prices of shares of companies that rely on technology and innovation;
- changes in regulatory policies or tax guidelines;
- changes or perceived changes in earnings or variations in operating results;
- any shortfall in revenue or net income from levels expected by investors or securities analysts; and
- general economic trends and other external factors.

Any of these could result in a material decline in the price of the ADSs.

Members of our board of directors and senior management own a significant percentage of our ordinary shares and are able to exert significant influence over matters subject to shareholder approval.

Members of our board of directors and senior management beneficially owned approximately 71.3% of our outstanding ordinary shares (including ordinary shares represented by ADSs), as of December 31, 2016. These shareholders have significant influence over the election of members of our board of directors and the outcome of corporate actions requiring shareholder approval, including dividend policy, mergers, share capital increases, amendments of our articles of association and other extraordinary transactions. For example, these shareholders may be able to influence the outcome of elections of members of our board of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transactions. In addition, our articles of association provide that, as long as Wilfried Vancraen, our founder and Chief Executive Officer, Hilde Ingelaere, an Executive Vice President of our company who is also Mr. Vancraen's spouse, and their three children, Linde, Sander and Jeroen Vancraen, or collectively the Family Shareholders, control, directly or indirectly, in the aggregate at least 20% of the voting rights attached to our ordinary shares, a majority of our directors must be appointed by our shareholders from a list of candidates proposed by the Family Shareholders. This concentration of ownership within this group of shareholders and the rights of the Family Shareholders prevent or discourage unsolicited acquisition proposals or offers for our ordinary shares or ADSs that you may feel are in your best interest as one of our shareholders. The interests of these existing shareholders or the Family Shareholders may not always coincide with your interests or the interests of other shareholders, and they may act in a manner that advances their best interests and not necessarily those of other shareholders, including seeking a premium value for their ordinary shares, which might affect the prevailing market price for the ADSs.

The dilutive effect of our warrants and convertible bonds could have an adverse effect on the future market price of the ADSs or otherwise adversely affect the interests of our shareholders.

Based on outstanding granted warrants and outstanding convertible bonds, as of December 31, 2016, there were outstanding granted warrants to subscribe for an aggregate of 1,681,000 ordinary shares at a weighted average exercise price of €8.25 per share, and €1.0 million of outstanding convertible bonds convertible into an aggregate of 508,904 ordinary shares at a conversion price of €1.97 per share. The warrants and convertible bonds likely will be exercised or converted if the market price of the ADSs equals or exceeds the applicable exercise or conversion price. To the extent such securities are exercised or converted, additional ordinary shares will be issued, which would dilute the ownership of existing shareholders.

You may not have the same voting rights as the holders of our ordinary shares and may not receive voting materials in time to be able to exercise your right to vote.

Except as described in the deposit agreement related to the ADSs, holders of ADSs are not able to exercise voting rights attaching to the ordinary shares evidenced by the ADSs on an individual basis. Under the terms of the deposit agreement, holders of ADSs may instruct the depositary to vote the ordinary shares underlying their ADSs, but only if we ask the depositary to ask for their instructions. Otherwise, holders of ADSs are not able to exercise their right to vote, unless they withdraw our ordinary shares underlying the ADSs they hold to vote them in person or by proxy. However, holders of ADSs may not know about the meeting far enough in advance to withdraw those ordinary shares. If we ask for the instructions of holders of ADSs, the depositary, upon timely notice from us, will notify holders of ADSs of the upcoming vote and arrange to deliver our voting materials to them. Upon our request, the depositary will mail to holders of ADSs a shareholder meeting notice which contains, among other things, a statement as to the manner in which voting instructions may be given, including an express indication that such instructions may be given or deemed given to the depositary to give a discretionary proxy to a person designated by us if no instructions are received by the depositary from holders of ADSs on or before the response date established by the depositary. However, no voting instruction shall be deemed given and no such discretionary proxy shall be given with respect to any matter as to which we inform the depositary that (i) substantial opposition exists, or (ii) such matter materially and adversely affects the rights of shareholders. We cannot guarantee that holders of ADSs will receive the voting materials in time to ensure that they can instruct the depositary to vote their shares. In addition, the depositary's liability to holders of ADSs for failing to execute voting instructions or for the manner of executing voting instructions is limited by the deposit agreement. As a result, holders of ADSs may not be able to exercise their right to give voting instructions or to vote in person or by proxy and they may not have any recourse against the depositary or our company if their shares are not voted as they have requested or if their shares cannot be voted.

You may not receive distributions on our ordinary shares represented by the ADSs or any value for them if it is illegal or impractical to make them available to holders of ADSs.

Under the terms of the deposit agreement, the depositary for the ADSs has agreed to pay to you the cash dividends or other distributions it or the custodian receives on our ordinary shares or other deposited securities after deducting its fees and expenses. You will receive these distributions in proportion to the number of our ordinary shares your ADSs represent. However, in accordance with the limitations set forth in the deposit agreement, it may be unlawful or impractical to make a distribution available to holders of ADSs. We have no obligation to take any other action to permit the distribution of the ADSs, ordinary shares, rights or anything else to holders of ADSs. This means that you may not receive the distributions we make on our ordinary shares or any value from them if it is unlawful or impractical to make them available to you. These restrictions may have a material adverse effect on the value of your ADSs.

We have no present intention to pay dividends on our ordinary shares in the foreseeable future and, consequently, your only opportunity to achieve a return on your investment during that time is if the price of the ADSs appreciates.

We have no present intention to pay dividends on our ordinary shares in the foreseeable future. Any recommendation by our board of directors to pay dividends will depend on many factors, including our financial condition, results of operations, legal requirements and other factors. Furthermore, pursuant to Belgian law, the calculation of amounts available for distribution to shareholders, as dividends or otherwise, must be determined on the basis of our non-consolidated statutory financial statements prepared under generally accepted accounting principles in Belgium, or Belgian GAAP. In addition, in accordance with Belgian law and our articles of association, we must allocate each year an amount of at least 5% of our annual net profit under our statutory non-consolidated accounts (prepared in accordance with Belgian GAAP) to a legal reserve until the reserve equals 10% of our share capital. Our legal reserve currently meets this requirement. As a consequence of these facts, there can be no assurance as to whether dividends or other distributions will be paid out in the future or, if they are paid, their amount.

As a foreign private issuer, we are exempt from a number of rules under the U.S. securities laws and are permitted to file less information with the SEC than U.S. domestic issuers. This may limit the information available to holders of ADSs.

We are a "foreign private issuer," as defined in the rules and regulations of the U.S Securities and Exchange Commission, or the SEC, and, consequently, we are not subject to all of the disclosure requirements applicable to U.S. domestic issuers. For example, we are exempt from certain rules under the Exchange Act that regulate disclosure obligations and procedural requirements related to the solicitation of proxies, consents or authorizations applicable to a security registered under the Exchange Act. In addition, our officers, directors and principal shareholders are exempt from the reporting and "short-swing" profit recovery provisions of Section 16 of the Exchange Act and related rules with respect to their purchases and sales of our securities. Moreover, we are not required to file periodic reports and consolidated financial statements with the SEC as frequently or as promptly as U.S. domestic issuers. Accordingly, there may be less publicly available information concerning our company than there is for U.S. public companies. As a foreign private issuer, we file an annual report on Form 20-F within four months of the close of each year ended December 31 and furnish reports on Form 6-K relating to certain material events promptly after we publicly announce these events. However, although we intend to continue to issue quarterly financial information, because of the above exemptions for foreign private issuers, we are not required to do so, and, therefore, our shareholders will not be afforded the same protections or information generally available to investors holding shares in public companies organized in the United States.

We may lose our foreign private issuer status in the future, which could result in significant additional costs and expenses.

As a foreign private issuer, we are not required to comply with all the periodic disclosure and current reporting requirements of the Exchange Act and related rules and regulations. The determination of foreign private issuer status is made annually on the last business day of an issuer's most recently completed second fiscal quarter. Accordingly, we will next make a determination with respect to our foreign private issuer status on June 30, 2017. There is a risk that we will lose our foreign private issuer status in the future.

We would lose our foreign private issuer status if, for example, more than 50% of our assets are located in the United States and more than 50% of our outstanding ordinary shares are held of record by U.S. residents. As of December 31, 2016, an immaterial amount of our assets were located in the United States. The regulatory and compliance costs to us under U.S. securities laws as a U.S. domestic issuer may be significantly greater than the costs we incur as a foreign private issuer. If we are not a foreign private issuer, we will be required to file periodic reports and registration statements on U.S. domestic issuer forms with the SEC, which are more detailed and extensive in certain respects than the forms available to a foreign private issuer. We would be required under current SEC rules to prepare our consolidated financial statements in accordance with U.S. GAAP and modify certain of our policies to comply with corporate governance practices associated with U.S. domestic issuers. Such conversion and modifications would involve significant additional costs. In addition, we may lose our ability to rely upon exemptions from certain corporate governance requirements on U.S. stock exchanges that are available to foreign private issuers such as the ones described above and exemptions from procedural requirements related to the solicitation of proxies.

We are an "emerging growth company" and we intend to take advantage of reduced disclosure and governance requirements applicable to emerging growth companies, which could result in the ADSs being less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart our Business Startups Act of 2012, or the JOBS Act, and we intend to continue to take advantage of certain exemptions from various reporting and governance requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and reduced disclosure obligations regarding executive compensation in our periodic reports and other public filings. Investors may find the ADSs less attractive because we rely on such exemptions. If some investors find the ADSs less attractive as a result, there may be a less active trading market for the ADSs and the price of the ADSs may be more volatile. We may take advantage of these reporting and governance exemptions until we are no longer an emerging growth company, which in certain circumstances could be as late as December 31, 2019.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. In other words, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We currently prepare our consolidated financial statements in accordance with IFRS, which do not have separate provisions for publicly traded and private companies. However, in the event we convert to U.S. GAAP while we are still an emerging growth company, we may be able to take advantage of the benefits of this extended transition period and, as a result, during such time that we delay the adoption of any new or revised accounting standards, our consolidated financial statements may not be comparable to other companies that comply with all public company accounting standards.

We have identified material weaknesses in our internal controls over financial reporting and if we fail to establish and maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial condition, results of operations or cash flows, which may adversely affect investor confidence in us.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, we are required, under Section 404 of the Sarbanes-Oxley Act, to perform system and process evaluations and testing of our internal controls over financial reporting to allow management and our independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting. This assessment must include disclosure of any material weaknesses in our internal control over financial reporting identified by our management or our independent registered public accounting firm. A material weakness is a control deficiency, or combination of control deficiencies, in internal control over financial reporting that results in more than a reasonable possibility that a material misstatement of annual or interim consolidated financial statements will not be prevented or detected on a timely basis. Section 404 of the Sarbanes-Oxley Act also generally requires an attestation from our independent registered public accounting firm on the effectiveness of our internal control over financial reporting. However, for as long as we remain an emerging growth company as defined in the JOBS Act, we intend to take advantage of the exemption permitting us not to comply with the independent registered public accounting firm attestation requirement. At the time when we are no longer an emerging growth company, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our controls are documented, designed or operating. Our remediation efforts may not enable us to avoid a material weakness in the future.

Although we have expanded our accounting and compliance teams with additional staff and consultants with appropriate experience and technical accounting knowledge, our compliance with Section 404 will require that we incur further substantial accounting expenses and expend more significant management efforts. We currently do not have an internal audit group, and we may need to hire additional accounting and financial staff and consultants with appropriate experience and technical accounting knowledge, and compile the system and process documentation necessary to perform the evaluation needed to comply with Section 404. We may not be able to complete our evaluation, testing and any required remediation in a timely fashion. During the evaluation and testing process, we identified material weaknesses in our internal control over financial reporting, and concluded that our internal control over financial reporting was not effective as of December 31, 2016. See “Item 15. Controls and Procedures.” We cannot assure you that we will be able to remedy the material weaknesses in a timely fashion or at all, or that there will not be material weaknesses or significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations or cash flows. If we are unable to remedy the material weaknesses and conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting, we could lose investor confidence in the accuracy and completeness of our financial reports, the market price of the ADSs could decline, and we could be subject to sanctions or investigations by the NASDAQ Stock Market, the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

We have incurred and will incur significant increased costs as a result of operating as a company whose ADSs are publicly traded in the United States, and our management is required to devote substantial time to new compliance initiatives.

As a company whose ADSs are publicly traded in the United States, we have incurred and will incur significant legal, accounting, insurance and other expenses that we did not incur prior to our initial public offering. In addition, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act and related rules implemented by the SEC and the NASDAQ Stock Market have imposed various requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls. These costs will increase at the time when we are no longer an emerging growth company eligible to rely on exemptions under the JOBS Act from certain disclosure and governance requirements. Our management and other personnel need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations increase our legal and financial compliance costs and make some activities more time-consuming and costly. These laws and regulations could also make it more difficult and expensive for us to attract and retain qualified persons to serve on our board of directors or its committees. Furthermore, if we are unable to satisfy our obligations as a public company, we could be subject to delisting of the ADSs, fines, sanctions and other regulatory action and potentially civil litigation.

You may be subject to limitations on the transfer of your ADSs.

Your ADSs are transferable on the books of the depositary. However, the depositary may close its books at any time or from time to time when it deems doing so expedient in connection with the performance of its duties. The depositary may close its books from time to time for a number of reasons, including in connection with corporate events such as a rights offering, during which time the depositary needs to maintain an exact number of ADS holders on its books for a specified period. The depositary may also close its books in emergencies, and on weekends and public holidays. The depositary may refuse to deliver, transfer or register transfers of the ADSs generally when our share register or the books of the depositary are closed, or at any time if we or the depositary thinks that it is advisable to do so because of any requirement of law or of any government or governmental body, or under any provision of the deposit agreement, or for any other reason in accordance with the terms of the deposit agreement. As a result, you may be unable to transfer your ADSs when you wish to.

If securities or industry analysts do not publish research or reports about our business, or if they adversely change their recommendations regarding the ADSs, the market price for the ADSs and trading volume could decline.

The trading market for the ADSs is influenced by research or reports that industry or securities analysts publish about our business. If one or more analysts who cover us downgrade the ADSs, the market price for the ADSs would likely decline. If one or more of these analysts cease to cover us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which, in turn, could cause the market price or trading volume for the ADSs to decline.

It may be difficult for investors outside Belgium to serve process on or enforce foreign judgments against us or our directors and senior management.

We are a Belgian limited liability company. None of the members of our board of directors and senior management is a resident of the United States. All or a substantial portion of the assets of such non-resident persons and most of our assets are located outside the United States. As a result, it may not be possible for investors to effect service of process upon such persons or on us or to enforce against them or us a judgment obtained in U.S. courts. Original actions or actions for the enforcement of judgments of U.S. courts relating to the civil liability provisions of the federal or state securities laws of the United States are not directly enforceable in Belgium. The United States and Belgium do not currently have a multilateral or bilateral treaty providing for reciprocal recognition and enforcement of judgments, other than arbitral awards, in civil and commercial matters. In order for a final judgment for the payment of money rendered by U.S. courts based on civil liability to produce any effect on Belgian soil, it is accordingly required that this judgment be recognized or be declared enforceable by a Belgian court in accordance with Articles 22 to 25 of the 2004 Belgian Code of Private International Law. Recognition or enforcement does not imply a review of the merits of the case and is irrespective of any reciprocity requirement. A U.S. judgment will, however, not be recognized or declared enforceable in Belgium if it infringes upon one or more of the grounds for refusal which are exhaustively listed in Article 25 of the Belgian Code of Private International Law. These grounds mainly require that the recognition or enforcement of the foreign judgment should not be a manifest violation of public policy, that the foreign courts must have respected the rights of the defense, that the foreign judgment should be final, and that the assumption of jurisdiction by the foreign court may not have breached certain principles of Belgian law. In addition to recognition or enforcement, a judgment by a federal or state court in the United States against us may also serve as evidence in a similar action in a Belgian court if it meets the conditions required for the authenticity of judgments according to the law of the state where it was rendered. The findings of a federal or state court in the United States will not, however, be taken into account to the extent they appear incompatible with Belgian public policy.

Holders of ADSs are not treated as shareholders of our company.

Holders of ADSs with underlying shares in a Belgian limited liability company are not treated as shareholders of our company, unless they withdraw our ordinary shares underlying the ADSs that they hold. The depository is the holder of the ordinary shares underlying the ADSs. Holders of ADSs therefore do not have any rights as shareholders of our company, other than the rights that they have pursuant to the deposit agreement.

We are a Belgian limited liability company but are not a listed company in Belgium, and shareholders of our company may have different and in some cases more limited shareholder rights than shareholders of a listed company in Belgium or of a U.S. listed corporation.

We are organized as a limited liability company (*naamloze vennootschap / société anonyme*) under the laws of Belgium. Our corporate affairs are governed by Belgian corporate law. From a Belgian corporate law point of view, we qualify as a public company (*een vennootschap die een openbaar beroep op het spaarwezen heeft gedaan / une société ayant fait publiquement appel à l'épargne*), but not as a listed company (*genoteerde vennootschap / société cotée*) because none of our securities are listed on any regulated market

in the European Economic Area. The Belgian corporate law provisions that are applicable to Belgian listed companies do therefore not apply to us. Furthermore, we are not subject to most of the disclosure obligations applicable to Belgian listed companies. As a result, shareholders of our company may not enjoy certain of the rights and protection generally afforded to shareholders of a Belgian listed company.

You should also be aware that the rights provided to our shareholders under Belgian corporate law and our articles of association differ in certain respects from the rights that you would typically enjoy as a shareholder of a U.S. corporation under applicable U.S. federal and state laws.

Under Belgian corporate law, except in certain limited circumstances, our shareholders may not ask for an inspection of our corporate records, while under Delaware corporate law any shareholder, irrespective of the size of his or her shareholdings, may do so. Shareholders of a Belgian corporation are also unable to initiate a derivative action, a remedy typically available to shareholders of U.S. companies, in order to enforce a right of our company, in case we fail to enforce such right ourselves, other than in certain cases of director liability under limited circumstances. In addition, a majority of our shareholders may release a director from any claim of liability we may have, including if he or she has acted in bad faith or has breached his or her duty of loyalty, provided, in some cases, that the relevant acts were specifically mentioned in the convening notice to the shareholders' meeting deliberating on the discharge. In contrast, most U.S. federal and state laws prohibit a company or its shareholders from releasing a director from liability altogether if he or she has acted in bad faith or has breached his or her duty of loyalty to the company. Finally, Belgian corporate law does not provide any form of appraisal rights in the case of a business combination. For additional information on these and other aspects of Belgian corporate law and our articles of association, see "Item 10. Additional Information—B. Memorandum and Articles of Association." As a result of these differences between Belgian corporate law and our articles of association, on the one hand, and U.S. federal and state laws, on the other hand, in certain instances, you could receive less protection as a shareholder of our company than you would as a shareholder of a U.S. corporation.

As a foreign private issuer, we are not subject to certain NASDAQ Stock Market corporate governance rules applicable to U.S. listed companies.

We rely on provisions in the Listing Rules of the NASDAQ Stock Market that permit us to follow our home country corporate governance practices with regard to certain aspects of corporate governance. This allows us to follow Belgian corporate law and the Belgian Company Code, which differ in significant respects from the corporate governance requirements applicable to U.S. companies listed on the NASDAQ Global Select Market. See "Item 16G. Corporate Governance."

Holders of ADSs or ordinary shares have limited rights to call shareholders' meetings or to submit shareholder proposals, which could adversely affect their ability to participate in the governance of our company.

Except under limited circumstances, only the board of directors may call a shareholders' meeting. Shareholders who collectively own at least 20% of the ordinary shares of our company may require the board of directors or the statutory auditor to convene a special or an extraordinary general meeting of shareholders. As a result, the ability of holders of the ADSs or ordinary shares to participate in and influence the governance of our company is limited.

Holders of the ADSs have limited recourse if we or the depositary fail to meet our respective obligations under the deposit agreement or if they wish to involve us or the depositary in a legal proceeding.

The deposit agreement expressly limits the obligations and liability of us and the depositary. Neither we nor the depositary will be liable to the extent that liability results from the fact that we:

- are prevented or hindered in performing any obligation by circumstances beyond their control;
- exercise or fail to exercise discretion under the deposit agreement;
- perform our obligations without negligence or bad faith;
- take any action based upon advice of or information from legal counsel, accountants, any person presenting shares for deposit, any holder of the ADSs or any other qualified person; or
- rely on any documents we believe in good faith to be genuine and properly executed.

In addition, neither we nor the depositary has any obligation to participate in any action, suit or other proceeding in respect of the ADSs which may involve it in expense or liability unless it is indemnified to its satisfaction. These provisions of the deposit agreement will limit the ability of holders of the ADSs to obtain recourse if we or the depositary fails to meet our respective obligations under the deposit agreement or if they wish to involve us or the depositary in a legal proceeding.

Investors may not be able to participate in equity offerings, and ADS holders may not receive any value for rights that we may grant.

In accordance with Belgian corporate law, our articles of association provide for preferential subscription rights to be granted to our existing shareholders to subscribe on a pro rata basis for any issue for cash of new shares, convertible bonds or warrants that are exercisable for cash, unless such rights are canceled or limited by resolution of our shareholders' meeting or the board of directors. Our shareholders' meeting or board of directors may cancel or restrict such rights in future equity offerings. In addition, certain shareholders (including those in the United States, Australia, Canada or Japan) may not be entitled to exercise such rights even if they are not canceled unless the rights and related shares are registered or qualified for sale under the relevant legislation or regulatory framework. As a result, there is the risk that investors may suffer dilution of their shareholding should they not be permitted to participate in preference right equity or other offerings that we may conduct in the future.

If rights are granted to our shareholders, as the case may be, but if by the terms of such rights offering or for any other reason, the depositary may not either make such rights available to any ADS holders or dispose of such rights and make the net proceeds available to such ADS holders, then the depositary may allow the rights to lapse, in which case ADS holders will receive no value for such rights.

Shareholders in jurisdictions with currencies other than the euro face additional investment risk from currency exchange rate fluctuations in connection with their holding of our shares.

Any future payments of dividends on shares will be denominated in euro. The U.S. dollar—or other currency—equivalent of any dividends paid on our shares or received in connection with any sale of our shares could be adversely affected by the depreciation of the euro against these other currencies.

In order to satisfy our obligations as a public company, we may need to hire additional qualified accounting and financial personnel and consultants with appropriate experience.

As a public company, we need to establish and maintain effective disclosure and financial controls. We have hired additional accounting and financial personnel and consultants with experience and technical accounting knowledge in this respect, but we may need to hire additional personnel and consultants with appropriate experience and technical accounting knowledge. It is difficult to recruit and retain such personnel and consultants, and our operating expenses and operations are and will be impacted by the direct costs of their employment or engagement and the indirect consequences related to the diversion of management resources from research and development efforts.

We do not expect to be a passive foreign investment company for U.S. federal income tax purposes; however, there is a risk that we may be classified as a passive foreign investment company, which could result in materially adverse U.S. federal income tax consequences to U.S. investors.

We do not expect to be a passive foreign investment company, or a PFIC. However, the relevant rules are not entirely clear and certain aspects of the tests will be outside our control; therefore, no assurance can be given that we will not be classified as a PFIC for any taxable year. If you are a U.S. taxpayer and we are determined to be a PFIC at any time during your holding period, you may be subject to materially adverse consequences, including additional tax liability and tax filing obligations. See "Item 10. Additional Information—E. Taxation—U.S. Taxation—Passive Foreign Investment Company."

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

Materialise NV was incorporated in Belgium on June 28, 1990 as a limited liability company under Belgian company law.

On June 30, 2006, we split off our dental business through a partial de-merger, whereby the Belgian company Materialise Dental NV was formed. On July 24, 2006, an affiliate of DENTSPLY International Inc. acquired 40% of Materialise Dental NV, and subsequently increased its shareholding in Materialise Dental NV to 45.59% in October 2008 and to 100% in February 2011, and our shareholders received aggregate proceeds of approximately €34.5 million from such split off and the staggered sale of our dental business.

On April 23, 2007, we increased our shareholding in the French company OBL SA from 33% to 100%, for a purchase price of €1.5 million. OBL SA is assigned to our Materialise Medical segment.

On October 10, 2008, we formed the Belgian company Mobelife NV, in which we initially owned 80.36% of the shares. On March 5, 2015, we purchased the remaining 22.3% interest and, as a result, we own 100% of the shares of Mobelife NV. On December 5, 2016, after a transfer of all assets of Mobelife NV to Materialise NV, Mobelife NV was dissolved and ceased to exist. The business of Mobelife NV has been fully integrated in and is continued by our Materialise Medical segment.

On January 21, 2011, we acquired 100% of the shares of the German company Marcam Engineering GmbH, which specializes in software solutions for 3D printed metal products, for a purchase price of €2.0 million. Marcam Engineering GmbH is assigned to our Materialise Software segment.

On February 28, 2013, we spun off our fixturing business to a newly incorporated subsidiary, RapidFit NV. Through a capital increase, the Tina fund of the Flemish investment company PMV NV acquired 16.66% of the shares of RapidFit NV on June 27, 2013. For additional information regarding our agreement with PMV regarding RapidFit NV, see "—RapidFit NV Shareholders' Agreement" below. On September 30, 2013, RapidFit NV, through an asset purchase agreement, acquired for a purchase price of €0.4 million Advanced Machining, Ltd., a Michigan corporation, which is assigned to our Materialise Manufacturing segment. On December 31, 2016, we decided to transfer all the assets and activities of RapidFit, LLC, a subsidiary of RapidFit NV.

On January 28, 2014, we acquired e-prototypy (which was subsequently renamed Materialise) SA, located in Wroclaw, Poland, which operates what we believe to be one of the largest 3D printing service centers in Poland, for a purchase price of €1.3 million. The company, which is assigned to our Materialise Manufacturing segment, specializes in the production of additive manufactured prototypes and end-parts and also provides scanning and reverse engineering services.

On April 29, 2014, we established RS Print NV, a 50/50 joint venture with RS Scan International NV, a Belgian company that designs and sells, among other things, foot scanning equipment and customized footwear. RS Print NV is active in the combined business of (i) providing technology for the design and additive manufacturing of customized footwear and footwear components and (ii) producing, with additive manufacturing technology, such footwear products. Each party contributed €500,000 to the joint venture at its incorporation and further contributions have been made (as part of a commitment to contribute an additional €4.0 million).

On June 30, 2014, we sold 8,000,000 ADSs in our initial public offering at a price of $12.00 per ADS, and received net proceeds of approximately $88.3 million. The ADSs we sold in the initial public offering represented new ordinary shares issued in a capital increase resolved by our shareholders for the purposes of the initial public offering on April 23, 2014.

On October 21, 2014, we acquired OrthoView Holdings Limited, a leading provider of 2D digital pre-operative planning and templating solutions for orthopedic surgeons, for a cash payment of £8.47 million. OrthoView Holdings Limited is located in the United Kingdom and employs approximately 23 people. OrthoView Holdings Limited's software is a 2D digital pre-operative planning and templating solution for orthopedic surgeons. OrthoView Holdings Limited's software imports a digital X-ray image from a picture archiving and communication system, or PACS, and positions the templates of suitable prostheses on the X-ray image at the correct scale. We are gradually adding 3D surgical pre-planning tools and related 3D printed medical devices to OrthoView Holdings Limited's product offering.

On March 10, 2015, we acquired the Belgian-based company Cenat BVBA. With Cenat BVBA's proprietary technology on machine control, we have added new software solutions for ensuring adequate quality control in additive manufacturing production processes.

Our principal executive and registered offices are located at Technologielaan 15, 3001 Leuven, Belgium. Our telephone number is +32 (16) 39 66 11. We are registered with the Register of Legal Entities of Leuven under the number 0441.131.254. Our agent for service of process in the United States is Materialise USA, LLC, located at 44650 Helm Ct., Plymouth, Michigan 48170, telephone number (734) 259-6445. Our internet website is www.materialise.com. The information contained on, or accessible through, our website is not incorporated by reference into this annual report and should not be considered a part of this annual report.

Capital Expenditures

Our capital expenditures amounted to €17.6 million, €14.4 million and €13.2 million for the years ended December 31, 2016, 2015, and 2014, respectively. In 2016, our main capital expenditures were €6.1 million related to building constructions in Belgium and Poland and €8.3 million for new machinery and installations, mainly in Europe. In 2015, our main capital expenditures were €3.3 million for land in Belgium and Poland for the extension of our headquarters and the addition of production facilities, respectively, €1.1 million for buildings in the United States and €7.3 million for additional machinery for our production facilities. In 2014, our main capital expenditures were €2.5 million for the acquisition of the 34 Fused Deposition Modeling, or FDM, printers and related equipment that we previously operated under a prior cooperation agreement with Stratasys Ltd. until December 2014, and €6.4 million for the acquisition of additional printers (including the metal printers that we acquired for the purpose of printing our own complex surgery medical implants). As of December 31, 2016, we have committed expenditures for the amount of €10.2 million related to the construction of the new buildings in Belgium and Poland, which we expect will mainly be financed by means of bank loans.

B. Business Overview

Our Mission

Our mission is to make a significant and lasting contribution to a better and healthier world through innovative applications of additive manufacturing using our software and hardware infrastructure.

Our Company

We are a leading provider of additive manufacturing and medical software and of sophisticated 3D printing services. Our customers are active in a wide variety of industries, including healthcare, automotive, aerospace, art and design and consumer products. Since our founding in 1990 by our Chief Executive Officer, Wilfried Vancraen, we have consistently focused on developing innovative applications of additive manufacturing technologies. We believe our proprietary software platforms, which enable and enhance the functionality of 3D printers and of 3D printing operations, have become a market standard for professional 3D printing. We believe that our commitment to enabling 3D printing technologies has significantly supported and accelerated the acceptance and proliferation of additive manufacturing in the industrial and medical sectors and will continue to play an instrumental role as the industry evolves. In the healthcare sector, we bring software and medical devices to the market. Our medical software products include surgical planning tools that allow medical professionals to make 3D printable designs of the human anatomy. Our medical devices include surgical guides as well as customized medical implants. In our 3D printing service centers, including what we believe to be the world's largest single-site additive manufacturing service center in Leuven, Belgium, we print medical devices, prototypes, production parts, and consumer products. As of December 31, 2016, our team consisted of 1,432 full-time equivalent employees, or FTEs, and fully dedicated consultants. Our portfolio of intellectual property features 180 patents and 192 pending patent applications as of December 31, 2016. For the year ended December 31, 2016, we generated €114.5 million of revenue, representing 12.2% growth over the prior year, net loss of €3.0 million and Adjusted EBITDA of €9.5 million. For a description of Adjusted EBITDA and a reconciliation of our net profit to our Adjusted EBITDA, see "Item 5. Operating and Financial Review and Prospects—A. Operating Results—Other Financial Information."

Our Core Competencies

Our established and proven business model integrates our three research-based core competencies: (i) software development, (ii) 3D printing, and (iii) engineering, which act as complementary incubators for our new products and function as integrated support centers for our existing products. The interaction and synergies among our software development, 3D printing and engineering teams position us well to continuously develop and support innovative applications of 3D printing that often integrate all three core competencies.

Software Development. Our expertise in developing 3D printing software originated from our efforts to enable 3D printing applications and to continually improve processes within our own additive manufacturing operations. As a result of our continued deployment over the course of more than 25 years of human, intellectual and economic capital to software development, a number of our products, including Magics and Streamics, have evolved into industry-leading flagship products. Our software competency has evolved into a well-structured organization with 325 FTEs and fully dedicated consultants as of December 31, 2016 based at our headquarters in

Belgium and our local field offices in Germany, Malaysia, Ukraine, Poland, China and the United Kingdom. Our software development team works in close partnership with the commercial groups that are active in our various market segments through project teams that support our various products and services. These project teams rely, in turn, on research and development groups that develop libraries of software code that can be shared in multiple products and services across various markets. We have an established quality management system for the development of our software products that is ISO 9001 certified. We are also ISO13485 certified for our medical applications and our medical applications comply with the regulatory requirements of several jurisdictions, including Europe and the United States.

3D Printing. As a pioneer in the additive manufacturing industry, we believe we have an extensive history of 3D printing millions of parts utilizing a broad array of technologies, often in highly regulated environments, for thousands of commercial, industrial and medical customers. We operate some of the most sophisticated printing machines currently available on the market, as well as our own proprietary stereolithography-based technology, Mammoth, to provide a very broad range of technologies, sizes, materials and finishing degrees and to address the needs of customers across a large number of potential markets. Production is organized in multiple production lines that are dedicated to the Medical and the Industrial Production segments that we serve. Our 3D printing group, which operates in an ISO 9001-certified quality management system, in an ISO 13485-certified system for the production of medical devices, and in an EN9100 certified system for the production of plastic aerospace parts, has its own maintenance and research team that utilizes an in-house laboratory facility where products can be tested. The wide variety of products that are processed by our multiple production lines are logistically streamlined through our proprietary database systems that manage the entire process from order intake to 3D printing to final shipment. As of December 31, 2016, we had production teams consisting of 281 FTEs and fully dedicated consultants who are spread throughout our headquarters in Belgium and our local field offices in the Czech Republic, Germany, Poland, Japan and the United States. As of December 31, 2016, we operated a total of 144 3D printers and six vacuum casting machines at these service centers. (See "—Manufacture and Supply" for more detailed information about the printers we operate).

Engineering. Our engineering expertise is integral to our entire business, as it enhances our software development and 3D printing expertise. Our engineers work in teams that support customers in different market segments. These teams work directly with our customers to identify new, and customize and refine existing, 3D printing applications and to increase productivity, efficiency and ease of use across all aspects of the solutions we provide. Our engineering teams have particular expertise in industrial and medical applications, including patient-specific surgical guides, models and implants with the applicable market clearances. Our teams are highly specialized, especially in the medical field, and include quality controllers, development researchers for new hardware concepts and trainers who bring new engineers to the required level of expertise. Our engineers operate within the framework of a certified quality management system. Our engineering teams make extensive use of our proprietary software tools and have direct access to our 3D printing center where developments can be tested in an actual production environment. As of December 31, 2016, we had engineering teams consisting of 189 FTEs and fully dedicated consultants based at our headquarters in Belgium and our local field offices in Malaysia, Ukraine and Colombia.

Our Market Segments

The product and service offerings developed by our three core competencies are offered through a market oriented organization that is active across three principal market segments: (i) Materialise Software, (ii) Materialise Medical, and (iii) Materialise Manufacturing. We believe that our customers benefit significantly from the synergistic interplay between our core competencies and the three market segments on which we focus and which provide constant end-user feedback to the product development and support teams within our core competencies. For example, we believe our software programs have become globally leading products in the markets we serve as a result of many factors including the sharing of knowledge within our central software development group as well as our in-house production operations, which enable us to continuously innovate, refine and focus our software solutions and provide us with valuable insight into our customers' objectives and needs. Similarly, certain aspects of the equipment, processes and know-how that enable us to print surgical guides cleared by the FDA, and CE-labeled implants are applicable to certain industrial markets we serve, including automotive and aerospace, where our customers have stringent requirements for high quality precision parts.

Our Materialise Software Segment

In our Materialise Software segment, we offer proprietary software worldwide through programs and platforms that enable and enhance the functionality of 3D printers and of 3D printing operations. We have developed software that interfaces between almost all types of 3D printers, and various software applications and capturing technologies, including CAD packages and 3D scanners, by enabling data preparation and process planning. Our programs interface with machines manufactured by leading original equipment manufacturers, or OEMs, such as 3D Systems Corporation, Arcam AB, Concept Laser GmbH, envisionTEC GmbH, EOS GmbH, The ExOne Company, Renishaw PLC, SLM Solutions Group AG, Stratasys Ltd. and voxeljet AG. In addition, we have entered into a partnership agreement with Siemens for the integration of our additive manufacturing technology into Siemens' NX software, which will enable the streamlining of the design to manufacturing process for products being produced using additive manufacturing. We offer software that enables our customers to more efficiently organize the entire workflow of a 3D printing operation with multiple 3D printing machines,

many operators and complex data flow and logistical requirements. We believe that the capabilities of our software products and their unique compatibility with almost all 3D printing systems continue to set standards in the professional 3D printing software market. Customers operating machines from multiple OEMs and customers running large 3D printing operations are among those who can benefit the most from our software packages and we believe that in many cases those customers demand compatibility with our software from the systems OEMs.

As of December 31, 2016, our Materialise Software segment (including core competencies) had a team of approximately 251 FTEs and fully dedicated consultants, with approximately 39% based at our headquarters in Belgium and the remaining employees distributed throughout our local field offices in China, Germany, Japan, Malaysia, the United Kingdom and the United States.

Business Model. We generate revenue in our Materialise Software segment from our software licenses, maintenance contracts, hardware controller sales for our Materialise Controllers and custom software development services. We license our software products to our customers on either a time-based or perpetual basis, in which case we offer annual maintenance contracts that provide for software updates and support. We charge our custom software development services either on a time and material or on a fixed-cost basis. For the years ended December 31, 2016, 2015 and 2014, our Materialise Software segment generated revenue of €30.1 million, €25.8 million and €18.1 million, respectively, representing 26.3%, 25.3% and 22.2% of our total revenue, respectively, and 16.8%, 42.6% and 34.7% growth over the prior year, respectively.

Software Products. We have a diversified portfolio comprised of software applications addressing different 3D market opportunities. Our decades of experience in the additive manufacturing industry are reflected in the sophisticated 3D printing software and business management tools we provide for our customers. We believe that each of our software applications is, or has the potential of becoming, one of the leading technologies in its domain. We believe that our neutral platform approach positions our software to drive greater innovation and choice in the 3D printer software ecosystem, and provides 3D printer users with more powerful and flexible printing capabilities.

In particular, we offer the following software applications:

- *Magics*. Magics enables customers to import a wide variety of CAD formats and to export standard tessellation language, or STL, files ready for additive manufacturing. Magics' applications include repairing and optimizing 3D models; analyzing parts; making process-related design changes on customers' STL files; designing support structures; documenting customer projects; nesting multiple parts in a single print run; and process planning.

Our Magics platform is enhanced with modules that further expand functionality and utility for our customers. For instance, the Magics Import Module plays an important role in efficiently moving CAD designs through to manufactured products by importing nearly all standard CAD formats into Magics. The Magics Structures Module was designed to help customers to reduce weight and material usage in their designs. We also have developed logistical modules such as the Magics SG Module, which offers tools for support structure design during the 3D printing process, and the Magics Sintermodule, which offers solutions for automated part nesting, protecting small and fragile parts and locating them after building.

- *Streamics.* Complementary to Magics is our Streamics product, which is a central additive manufacturing logistics and control system that links operators, 3D printers (including those from various OEMs and based on different technologies), processes, materials and shipment flows together to improve customer service and save time and money. Streamics provides a user-friendly, server-based system, which centralizes our customers' project data and makes it easier to collaborate among team members and communicate with customers. The configurable modules are designed to facilitate communication, support the organization and execution of data preparation, plan machine capacity, and guide post-processing steps, allowing additive manufacturing teams to quickly adapt to business and market changes.
- *3-matic*^{STL}. 3-matic^{STL} is a versatile application that permits, among other things, design modification, design simplification, 3D texturing, re-meshing and forward engineering directly to standard additive manufacturing STL files.

- *MiniMagics and MiniMagics*^{Pro}. MiniMagics and MiniMagics^{Pro} provide solutions for our customers working in data preparation, or in quoting and quality control teams. MiniMagics allows customers to view STL files and communicate in an efficient way with their account manager by seeing the same visualization of the part on their respective screens. MiniMagicsPro is a professional STL file communication tool that allows account managers to access multiple file formats and exchange annotations and comments with the customer, and generate quotations taking into account file quality and the appropriate build orientation of each part. MiniMagics ^{Pro} is designed to give our customers' quality control and finishing teams the ability to compare measurement results with the initial design and deliver professional quality reports.
- *Build Processors and Machine Control Software*. We work in close collaboration with a wide variety of 3D printer OEMs to develop customized and integrated solutions for their additive manufacturing machines. Our build processors automatically translate the 3D model data into layer data to provide sliced geometry and can link the latter with the appropriate build parameters to feed the machine control software. Another key benefit of our build processors is that they allow for a two-way communication between Magics and 3D printers. In essence, the build processor not only tells the machine what to do, but is also capable of receiving feedback from the machine allowing the operator to trace and store data on specific jobs for quality control and other purposes. Our machine control software interprets sliced build data that is transferred to 3D printers and steers such machines, helping to ensure smooth and trouble-free production. As a result of our acquisition of Marcam Engineering GmbH in 2011, which is now fully integrated into our software development operations, we were able to expand our coverage of metal sintering machines.
- *e-Stage.* e-Stage is a software solution that increases additive manufacturing productivity by automating STL support generation, optimizing the STL build process, and reducing the time our customers spend on finishing work such as build support removal and sanding. e-Stage is designed to allow our customers to use less material, to be able to 3D nest and to minimize failed builds.
- *Materialise Controller.* Materialise Controller controls and steers additive manufacturing machines using embedded Materialise software, and is fully integrated into the Materialise 3D printing software platform. It is engineered towards research and development applications, machine manufacturers and those who want to control or adapt the production process to their specific needs.
- *3DPrintCloud.* Through this cloud based software-as-a-service (SaaS) solution, we make 3D printing functionality available online for integration into web-based and desktop applications. Next to the application programming interface (API) offering, a web-based application is available enabling upload and manipulation of design files. This solution is subscription based, and started with initial offerings of basic print preparation operations, such as fixing and printability checks. We expect that it will be extended following growing market needs for SaaS access to the Materialise Software portfolio .

Sales & Marketing. We market and distribute our software directly through our sales force as well as through our own website and third-party distributors. Our Belgian team oversees our global marketing strategy and sales processes. Our local field office employees manage sales for particular markets and provide pre- and post-sales technical support to our customers. In addition, OEMs and local dealers often distribute our software products together with their 3D printers, with our software enhancing the printers' value proposition and broadening the suite of applications available to the machines. Our sales force will typically follow up on these OEM or distributor sales to offer follow on products and services to the machine users.

Customers. We believe we have a reputation for providing high-quality software in the marketplace and have strong relationships with leading multinational customers and other key users of additive manufacturing. The customers for our Materialise Software segment include 3D printing machine OEMs as well as manufacturers in a variety of other industries, such as the automotive, aerospace, consumer goods and hearing aid industries, and external 3D printing service bureaus. Our Materialise Software segment customer base is spread across Asia, Europe and the United States.

For the years ended December 31, 2016, 2015 and 2014, our ten largest customers in the Materialise Software segment represented 15.6%, 10.5% and 12.3%, respectively, of our Materialise Software segment's revenue.

Competition. In our Materialise Software segment, we face indirect competition from the software developed by 3D printing OEMs, which are often more "closed ecosystem"-oriented (i.e., only focused on their own machines), and from companies that offer software that addresses one or more specific functional areas covered by our software solutions, such as providers of traditional CAD solutions. We compete directly with other providers of additive manufacturing management and machine control software, including open source software providers.

Growth Opportunities. As the number of internal and external service or production centers across the 3D printing industry grows with these 3D printing operations running more complex mixes of machines from different manufacturers and based on various technologies, as 3D printing will be increasingly used for the manufacturing of complex or customized end parts, and as the number of 3D printer manufacturers increases with new players initially focusing more on the hardware than on the software component of their 3D printers, we believe the demand for highly performing industrial 3D printing software platforms is likely to grow accordingly. Furthermore, we believe that the worldwide market for additive manufacturing software is tied to the growth of the overall additive manufacturing sector and in particular the number of industrial 3D printing systems in operation. As the volume of industrial 3D printing systems sold grows with increased adoption of additive manufacturing processes, 3D printing software, in particular in the professional segment of the market, will increasingly be needed to interface with these systems and allow for more efficient operation of those systems.

We believe that we can continue to expand our market penetration through expanding relationships with customers and OEMs, and through the continued innovation of our software products to adapt to and meet market demands. In order to be able to do so, we intend to bring our teams closer to our customer base worldwide, which will require continued investments in the expansion of our marketing and sales presence. In order to be able to meet the demands of new entrants on the market, we also intend to continue to invest significantly in the development of our software products, including furthering their compatibility with almost all 3D printers on the market. For example, we believe the market for metal-based printing will be a key growth area in the additive manufacturing industry and, while we believe we currently have a strong market position in software for metal printing, we are also committed to research and development of metal-based technologies, such as machine integration and porous structures generation.

Our Materialise Medical Segment

In our Materialise Medical segment, our product and services offering addresses what we believe to be long-term trends in the medical industry towards personalized, functional and evidence-based medicine.

As of December 31, 2016, our Materialise Medical segment consisted of approximately 523 FTEs, with approximately 30% based at our headquarters in Belgium and the remaining employees distributed throughout our local field offices in Australia, China, Colombia, France, Germany, Japan, Malaysia, the United Kingdom and the United States.

Business Model. We generate revenue in our Materialise Medical segment through clinical services and medical software. We sell medical devices that we print for our customers and sell licenses to our medical software packages and software maintenance contracts. We also provide custom software development and engineering services, for which we charge either on a time and material or on a fixed cost basis. The majority of these medical devices that we printed in 2016 were surgical guides (and related bone models) that were distributed to surgeons through our collaboration partners Zimmer Biomet, DJO Surgical, DePuy Synthes, Stryker, Global Orthopaedic Technology, Corin, Mathys and Lima. We also started to print patient-specific implants that we sell directly to hospitals or distribute through DePuy Synthes. The customer base for our medical software products includes academic institutions, medical device companies and hospitals. For the years ended December 31, 2016, 2015 and 2014, our Materialise Medical segment generated revenue of €37.9 million, €34.9 million and €30.0 million, respectively, representing 33.1%, 34.2% and 36.9% of our total revenue, respectively, and 8.8%, 16.1% and 7.3% growth over the prior year, respectively.

Medical Software. Our software allows medical-image based analysis and engineering as well as patient-specific design of surgical devices and implants. Our customers include leading research institutes, renowned hospitals and major medical device companies. Our medical software often serves as an introduction to our capabilities and in certain cases leads to clinical services opportunities. Our medical software packages are:

- *Materialise Mimics Innovation Suite*. The Materialise Mimics Innovation Suite is a complete set of tools developed for biomedical professionals that allows them to perform a multitude of engineering operations based on medical imaging data. The suite consists of several complementary products and services, including Materialise Mimics, Materialise 3-matic, engineering services and medical models, as well as consultancy and custom software development.
- *Materialise Mimics*. Materialise Mimics is software specifically developed for medical image processing that can be used to segment accurate 3D models from medical imaging data (for example, from CT or MRI) to measure accurately in 2D and 3D and to export 3D models for additive manufacturing or to Materialise 3-matic. These patient-specific models can be used for a variety of engineering applications directly in Materialise Mimics or Materialise 3-matic, or may be exported to third party software focused on statistical analysis, CAD or finite element analysis (which is used to predict how a product reacts to real-world forces such as vibration, heat and fluid flow).
- *Materialise 3-matic*. Materialise 3-matic focuses on anatomical design and is able to combine CAD tools with pre-processing capabilities directly on the anatomical data coming from Materialise Mimics. It enables our customers to conduct thorough 3D measurements and analysis, design a patient-specific implant, a surgical guide, or a benchtop model, and to prepare the anatomical data and/or resulting implants for simulation.
- *Materialise OrthoView*. Materialise OrthoView is a 2D digital pre-operative planning and templating solution for orthopedic surgeons. The software imports a digital X-ray image from a Picture Archiving and Communication System, or PACS, and positions the templates of suitable prostheses on the X-ray image at the correct scale. Materialise OrthoView currently serves more than 11,000 orthopedic surgeons in 60 countries globally, focusing primarily on joint replacements. We acquired OrthoView Holdings Limited in October 2014, and have included the OrthoView solution in our portfolio of pre-operative planning solutions and have been gradually integrating 3D solutions in the OrthoView product.

- *Materialise Mimics inPrint.* With Materialise Mimics inPrint, clinicians can easily create files for 3D printing and use anatomically accurate models to help simulate or evaluate options for patient-specific surgical treatment. This software was designed specifically around the needs of clinicians to integrate seamlessly into their existing workflow. Materialise Mimics inPrint allows clinicians to get patient images from PACS and directly import them to start the 3D printing process. The software is compatible with digital imaging and communications in medicine, or DICOM, standard, which ensures easy connections with all modern imaging systems. By sharing virtual or printed 3D models as an interactive PDF on any device, communication is both immediate and clear with co-workers, the surgical team and patients.
- *Materialise ProPlan CMF.* Materialise ProPlan CMF is a software package developed for oral, maxillofacial, nose, throat and plastic surgeons. The software allows surgeons to pre-operatively plan their surgeries in 3D based on (CB)CT or MRI images using a set of tools to analyze, measure and reconstruct the patient's anatomy. With the software the surgeon can also plan the movements (translations and rotations) of the mandible or maxilla and preplan the reconstruction of defects.

Clinical Services. Using our FDA-cleared and CE compliant medical software, we analyze 3D medical images of patients and provide their doctors with virtual surgical planning services for their review and approval. In most cases, we also design and 3D print surgical guides that uniquely fit a specific patient and allow the surgeon to conduct the operation in accordance with the approved surgical plan. In certain circumstances, we deliver 3D printed customized patient-specific medical implants. In our 3D printing centers in Belgium and the United States, we have separate production lines, with an aggregate of 24 machines that only print devices for our Materialise Medical segment.

We believe that our medical image-based simulation and planning software and 3D printing technology can assist medical device companies, hospitals and clinicians in solving complex problems, ranging from virtual preparation tools, over patient-specific surgical guides, to patient-specific implants which can contribute to increased quality of life.

Utilizing our SurgiCase Connect tool, surgeons upload CT or MRI medical image data and submit their cases to us, track their cases and review them as interactive virtual 3D models. SurgiCase Connect enables our clinical engineers to better support the surgeons in the creation of surgical plans and guides. Surgeons using our orthopedics and CMF clinical services work together with our clinical engineers to turn their patients' medical image data into virtual surgical plans, and patient-specific 3D printed precise surgical and customized anatomical models to optimize surgical planning. In the framework of our collaborations with certain leading medical device companies, our SurgiCase Connect tool is rebranded and adapted to the specific product offering and needs of our collaboration partners.

Our 3D printed surgical guides include joint replacement guides for knee, shoulder and hip replacement surgeries, osteotomy guides and CMF guides, and our 3D printed implants include hip-revision implants, shoulder and CMF implants. The surgical guides we print for U.S. based patients are FDA-cleared, and our medical devices for EEA-based patients bear the appropriate CE labels. We address large surgical markets in orthopedics and CMF through collaboration agreements with leading medical device companies, including Zimmer-Biomet, DJO Surgical, DePuy Synthes, and Lima. Pursuant to these agreements, we print joint replacement and CMF guides that our collaboration partners distribute under their own brands, together with their own implants, in the United States, Europe, Japan and Australia. We leverage our collaboration partners' distribution capabilities to extend our reach into these large markets, and our collaboration partners utilize our 3D printing-related expertise to provide surgical planning and customized devices to surgeons. We also address certain high value-added, specialty applications by providing the full solution ourselves, including the delivery of CE-labeled implants and guides directly to the hospital or surgeon. Such applications include customized hip revision, shoulder and CMF implants in a patented porous matrix configuration and osteotomy guides. Our CMF implants, hip revision and shoulder implants and osteotomy guides are currently distributed in Europe, and our CMF implant activities are conducted through our subsidiary OBL SA. The shoulder and hip revision implant activities, which used to be conducted through our subsidiary Mobelife NV, are now conducted through our company, following the dissolution of Mobelife NV.

We also work with customers to print anatomical models that may be used for a wide range of applications such as sizing of medical devices, clinical trials, training, patient communications and marketing. For example, our HeartPrint service provides 3D printed cardiovascular anatomical models. These models are printed using our proprietary process that makes possible a superior final product that is flexible. We also print transparent or multi-color models for better visualization of the anatomy. Each of our core competencies was instrumental in developing the HeartPrint technology.

Sales and Marketing. We distribute our medical software through our direct sales force, our website and PACS partners (some of which partners also include our OrthoView solutions in their product offering to hospitals). We distribute our 3D printed medical devices primarily through our agreements with our collaboration partners such as Zimmer Biomet, Depuy Synthes and Stryker. In specialty markets, we market and distribute our 3D printed medical devices and other clinical services through our experienced engineers who develop a close collaboration with key opinion leaders in each of these market segments.

All our activities in our Materialise Medical segment are coordinated and supervised from our headquarters in Belgium, which supervises product management and sales of our medical devices and software products. Our medical software sales teams are organized by target markets, including the orthopedic, CMF, cardiovascular, academic and hospital markets. Sales representatives in our local field offices focus on the sale of medical software in their respective markets. The product management and sales of our CMF implants are centralized in the France office of OBL, while product management and sales of our shoulder and hip revision implants activities are coordinated at our headquarters in Belgium.

Customers. The customers for our Materialise Medical segment mainly include medical device companies, hospitals, universities and industrial companies. For the year ended December 31, 2016, Zimmer Biomet, DJO Surgical, DePuy Synthes, and Lima collectively represented 43.9% of the sales of this segment and total software sales represented 37.1% of our total Materialise Medical segment sales. Most of our other clinical service sales to customers are executed on the basis of single transaction contracts or purchase orders. These contracts and purchase orders lay out the pricing, delivery and other terms of the order.

Collaboration Partners. We collaborate with leading medical device companies for the development and distribution of our surgical planning software, services, and products, including with Zimmer Biomet, DJO Surgical, DePuy Synthes, Global Orthopaedic Technology, Lima and Mathys. Pursuant to these arrangements, we develop and license software and sell surgical guides, including for use in the fields of knee and shoulder replacement, CMF and thoracic procedures that our collaboration partners may then distribute under their own brands, together with their own implants, mainly in the United States, Europe, Japan and Australia. In addition, we grant licenses to collaboration partners to use, market and distribute such software or surgical guides. Some of the licenses we have granted to our products and software provide for exclusive rights, including with respect to a particular field of medicine or to the software or product developed during the collaboration, and certain collaboration partners may have rights of first refusal with respect to related products or collaborations. The compensation structures under these arrangements vary and may include an upfront fee, royalties, milestone payments linked to certain targets, and fees for the service, maintenance and training we provide in connection with our software and products.

Competition. In our Materialise Medical segment, we compete with a number of companies that provide 3D printed surgical models or medical devices, such as Medical Modeling, as well as with medical device companies that are developing in-house capacity to offer 3D printed medical devices and related software services. Our medical software competes with companies that include SimpleWare, 3mensio, Apollo and WITHIN Lab.

Growth Opportunities. The Materialise Medical segment is the market where we believe we can most directly realize our mission statement and contribute to a healthier world. We are currently investing significantly in the development of new product offerings as well as the expansion of our distribution channel in the various sub-segments of our Materialise Medical segment. In the surgical guide business, our growth over the last few years has come primarily from the knee-implant market, a market where medical device

companies are currently developing their own guide solutions. We have been developing solutions for additional joints and have recently launched guides for shoulders and hips. We have also developed other applications, such as malunion and osteotomy surgical guides. We intend to further diversify our product portfolio through product development as well as and entering into new collaborations. For example, we are making significant investments in research to produce 3D printable models based on X-ray data.

In the implant business, the extensive clinical evidence that both OBL SA and Mobelife NV have developed with key opinion leaders over the last few years regarding the efficacy of our customized CMF and hip revision implant solutions is now gradually finding its way into scientific publications. We believe that this development will help the growth of our CMF and hip revision implant activities, which we intend to further support through distributors as well as our local sales offices. In addition, we expect to leverage our experience with existing implant activities to develop new applications for other rare conditions that may benefit significantly from a patient-specific solution. We expect that both our existing CMF and hip revision implant activities and the development of applications for new specialty markets will require additional significant investments in the near future.

As a result of the trend that we see in the medical community towards more patient-specific devices and treatments, a growing number of academic, clinical and commercial researchers are focusing on customized medical treatments. Because these new products and treatments can only be brought to the market in compliance with very strict regulatory requirements, we believe there is an opportunity for providers of safe and stable medical software tools, such as our company, that can pass significant regulatory scrutiny.

We believe that our medical services and software may also help to reduce the clinical trial effort and expense for medical device companies by allowing more efficient bench-top modelling, testing and simulations and by increasing efficiency in the selection of eligible patients.

In general, our customers use our Mimics Innovation Suite either as a research and development tool for the development of new medical devices or innovative surgical approaches or as a production tool for the manufacturing of customized or customizable medical devices. The needs and priorities of our Mimics Innovation Suite customers vary depending on their primary use. Customers that focus on research and development applications prefer an advanced, rapidly evolving tool that gives them immediate access to our latest innovations. In contrast, customers that focus on production require a more static product that has passed extensive testing and verification required for regulatory purposes. We have launched two versions of our Mimics Innovations Suite, through which we aim to better tailor the product to this differentiated customer base.

As we intend to continue to invest in product development and market penetration, we will require certain capital commitments and may experience an impact to our revenue and profitability levels in the near term. However, we expect such investments to form the basis of stable annual revenue growth in the longer term.

Our medical engineering services offerings, which we continue to build, assist medical device companies in their designs. Our engineers not only serve the orthopedic field but also the cardiovascular field where new and customized approaches are being developed and sizing of devices is an important development area. As product managers in the medical device industry continue to recognize the value of, and need for, specialized advice and assistance in the design of new 3D printable devices, our medical engineering services may grow accordingly.

Our Materialise Manufacturing Segment

In our Materialise Manufacturing segment, we primarily offer 3D printing services to industrial and commercial customers, the majority of which are located in Europe. In addition, we have identified, and provide 3D printing services to, certain specialty growth markets in both the industrial and consumer marketplaces.

Many of the parts we print require functionality that cannot be delivered using other production processes. We believe that our industrial customers value the high quality, accuracy, complexity, durability, functionality and diversity in terms of size, scale and materials of the 3D printing services that we can offer. We deliver products to highly regulated industries, such as aerospace, healthcare, machine manufacturing, quality control equipment and consumer goods, where our applications, technology and hardware capabilities enable us to adhere to high quality standards in a certified production environment.

As of December 31, 2016, our Materialise Manufacturing segment consisted of 426 FTEs and fully dedicated consultants, with based 42% at our headquarters in Belgium and the remaining employees distributed throughout our local field offices in Austria, the Czech Republic, France, Germany, Italy, Poland, Spain, Sweden and the United Kingdom.

Business Model. We generate revenue in our Materialise Manufacturing segment through the sale of parts that we print for our customers. For the years ended December 31, 2016, 2015 and 2014, our Materialise Manufacturing segment generated revenue of €46.4 million, €41.4 million and €33.2 million, respectively, representing 40.5%, 40.6% and 40.8% of our total revenue, respectively, and 12.1%, 24.6% and 22.0% growth over the prior year, respectively. For the year ended December 31, 2016, approximately 80.0% of the revenue was derived from the printing services offered by our additive manufacturing solutions business and 20.0% of the revenue was derived from our niche industrial and consumer solutions, RapidFit+ and i.materialise. Of the revenue generated by our additive manufacturing solutions business for the year ended December 31, 2016, approximately 59.4% was derived from rapid prototyping and approximately 40.6% was derived from additive manufacturing of end parts.

Industrial Services. We offer the following services in our Materialise Manufacturing segment:

- ***Additive Manufacturing Solutions.*** We provide design and engineering services and rapid prototyping and additive manufacturing of production parts to customers serving the automotive, consumer goods, industrial goods, art and architecture and aerospace markets. In our service centers in Belgium, the Czech Republic and Poland and Germany, as of December 31, 2016, we operated 120 3D printers and six vacuum casting machines, producing both prototypes and production parts based on our customers' product designs. Our service centers offer a variety of 3D printing technologies including stereolithography, laser sintering, FDM, PolyJet, powder binding, Multi Jet Fusion, selective laser melting(or SLM), and vacuum casting. In order to meet specific customer needs for very large printed parts, we developed Mammoth, our own proprietary stereolithography technology, which we believe is capable of printing parts larger than those produced using any other stereolithography technology by utilizing a build area of approximately 1.26 cubic meters with a length of 2 meters. We currently operate 15 Mammoth 3D printers in our Belgian service center.
- ***Niche Industrial and Consumer Solutions.*** We have developed additive manufacturing solutions that serve certain specialty industrial and consumer applications. Our RapidFit+ business utilizes additive manufacturing to provide the automotive market with customized, highly precise and, in certain cases, patent protected measurement and fixturing tools. We engineer and 3D print fixtures that allow automobile manufacturers and their suppliers to improve the quality control and efficiency of their manufacturing processes by allowing them to inspect and measure component parts, such as bumpers, before assembly. Through the use of additive manufacturing technology, we believe that RapidFit+ fixtures provide more functionality and flexibility than the traditional fixtures that are currently widely used in the automotive industry. In 2013, we established a subsidiary, RapidFit Inc., in the United States to directly access the U.S. automotive market. In 2015, we expanded our RapidFit Inc. production capabilities with one 3D printer. In 2016, we fully integrated the RapidFit+ business into our Materialise Manufacturing segment.

In the consumer market, i.materialise, our global online 3D printing service that caters to the "home professional." Designers, students, inventors and everyday consumers who want to create something unique can utilize our online service to produce their own products and, if they desire, share their products with, and even offer them for sale to others through our platform. Users can upload their 3D designs, choose from a large selection of materials and colors, and instantly see the price for such models in the desired scale and quantities. Users can also buy 3D printed products from the catalogue of .MGX by Materialise or other third party designs on our i.materialise website. .MGX by Materialise is a collection of 3D printed lamps, furniture, and other home furnishings and accessories, many of which have been developed in collaboration with well-known designers to showcase the opportunities that additive manufacturing offers to create products with a new look and innovative functionality. Pieces from the .MGX collection have become design icons featured in world renowned museums, including the Museum of Modern Art in New York and the Centre Pompidou in Paris, and have won many awards, including the Visionaries! award by the Museum of Art & Design, the Global Venice Award 2013 and the Red Dot Design Award. Through the .MGX by Materialise collection, we gain access to professionals as well as home designers. In 2016, we fully integrated the i.Materialise platform into our Materialise Manufacturing segment.

Sales and Marketing. We market our services to our additive manufacturing solutions business customers using our sales force and through our website. Our more complex product offerings are addressed directly by our specialized sales managers who are located throughout Europe in close proximity to our larger accounts and who align our customers' needs with the wide range of 3D printing technologies that we offer. More straightforward products can be ordered directly by our customers through our "Materialise OnSite" web portal, a proprietary automated system that takes orders, provides quotes and manages the printing process from start to finish, and allows customers to track the manufacturing and shipment process of their product online. Within our larger sales teams, specialized sales managers focus either on rapid prototyping, which is our traditional and well-established market, or the additive manufacturing of end-use production parts, which is the market where we see opportunities for significant growth. Our marketing team in Belgium oversees our global marketing strategy. In addition, employees at our Belgian headquarters and in our local field offices manage sales for particular markets and accounts and provide back office and production management support to our customers.

We have separate teams dedicated to the fixtures market where our account managers' thorough technical knowledge is key to effectively managing our RapidFit+ application. All sales for our i.materialise platform are through our website. The i.materialise sales and marketing team is mainly located at our headquarters in Belgium.

Customers. The customers for our Materialise Manufacturing segment are from a wide variety of industries, including automotive, aerospace, healthcare, industrial machining, art and design and consumer products For these customers, we offer a complete set of services ranging from co-creation, to design and engineering, rapid prototyping, and certified manufacturing of end-use parts, including the RapidFit+ service offered to automotive customers.

Through our co-creation offering, we work together with customers to solve complex design challenges and to discuss how the introduction of 3D printing can affect product development, manufacturing workflow, business models and customer experiences. For example, a co-creation with HOYA, in collaboration with Hoet Design Studio, saw the launch of the world's first vision-centric, 3D-tailored eyewear solution, Yuniku, in the fall of 2016. Yuniku enables individualized lens and frame design through a sophisticated end-to-end digital supply chain, which includes a custom 3D scanner and software platform, co-created by us and HOYA, directly linked to our Manufacturing factory where we provide our Certified Additive Manufacturing services.

Through our Design and Engineering service, we also provide support for those customers looking for support in their initial concept design or with maximizing a design for 3D printing. Our Design and Engineering team, which is comprised of highly specialized designers and CAD engineers, offers dedicated design and software support for additive manufacturing, including remodeling and file preparation, as well as 3D scanning and measuring.

The customers of both our Materialise OnSite and i.materialise platforms order through our website. Materialise OnSite customers tend to be industrial customers looking to rapid prototype parts quickly and reliably, often taking advantage of fast-lane machines to ensure short lead times for time-critical projects. For i.materialise, while there is a potential to address the wide consumer market with this platform, we prefer to describe our current customers as "home professionals." Our i.materialise client base includes independent designers and CAD hobbyists that often sell their creations or their services to others, including, in certain instances, through the i.materialise gallery. We believe this is an interesting subsegment of the market to focus on because these customers often have recurring needs and require a quality level that the market generally expects from us. Through i.materialise's APIs, companies can also partner with i.materialise to give their own customers a cloud-based, 3D-printing solution on their website, streamlining the ordering, manufacturing and shipping processes through a direct link to our factory for 3D printing. In 2016, Microsoft used the i.materialise API to offer a cloud-based 3D print solution for Windows 10 users, and PTC did the same for Creo 4.0 software users.

Most of our straightforward additive manufacturing and rapid prototyping solutions are executed on the basis of single transaction contracts or purchase orders with the customer. These contracts and purchase orders lay out the pricing, delivery and other terms of the order. For our Certified Additive Manufacturing service, an entirely new approach to ensure parts are made according to agreed standards is required, for which we have set processes to onboard new customers. An example of this is our dedicated aerospace manufacturing line, backed by certifications EN9100 and EASA Part 21G, through which we are currently manufacturing plastic parts for Airbus's A350 XWB. We expect that as demand for our Certified Additive Manufacturing service grows, more long-term agreements may be entered into.

For the automotive manufacturers and their suppliers that use our RapidFit+ service, the fixtures are custom engineered by dedicated teams. Our RapidFit+ customers, which include their quality departments, expect that fixtures meet high accuracy standards. A number of automotive OEMs in Europe are currently considering our innovative solution as a potential new standard, while a solid base of automotive Tier 1 suppliers in Europe has embraced RapidFit as one of their fixture solutions. We see that a growing number of global Tier 1 suppliers with facilities in the United States are currently placing limited orders with a view to investigating the advantages of our RapidFit+ technology.

Competition. In our additive manufacturing solutions business, we compete with a number of companies that provide industrial 3D printing services, including ARK, Cresilas, Protolabs and 3D Systems Corporation. In addition, larger accounts tend to move their 3D printing production in-house once their orders have reached certain volumes, which not only creates opportunities for our Materialise Software segment but also for our Materialise Manufacturing segment in terms of capacity balancing services. In the measurement and quality control fixture market addressed by RapidFit+, we are not aware of any direct competition coming from 3D printing companies. We do have competition, however, from a large group of smaller companies that are active in this field. While there are multiple startup companies seeking to address the home 3D printing services market, we believe that Shapeways and Sculpteo are the most prominent direct competitors of i.materialise based on their global reach. i.materialise focuses on standing out as a brand in terms of service and reliability.

Growth Opportunities. We believe that we can continue to meet the growing industrial demand for 3D printing services, in particular by increasing the number and capacity of our 3D printing service centers in Europe.

We believe that there is particular potential to grow our presence in the markets for additive manufacturing of industrial end products, including fixtures for the automotive industry and consumer 3D printed products. In recent years, more companies have been using additive manufacturing for production across a broad range of industrial sectors, including aerospace, orthopedic implants, surgical guides, dental copings and hearing devices. Additive manufacturing is also being used to manufacture specialty furniture, accessories for the home and office, personal accessories, fashion products, jewelry and footwear.

For industrial end parts, we intend to continue to invest in the expansion and creation of certified 3D manufacturing environments that meet the high standards of the specialized segments of the industrial production market that we focus on. In addition, we believe that our local sales teams, which are in close proximity to our customers, as well as our engineering teams, which can bring in additional expertise where required, are important and rather unique assets in this market that are worthwhile to continue to invest in.

We consider i.materialise as a component of our long-term strategy that may eventually penetrate the large consumer market once the general public becomes more familiar with 3D printing technology and logistic chains become more suitable to address this vast market. We intend to gradually invest in growing our presence in this market by initially addressing more focused customer groups such as "home professionals."

Geographic Information

Our revenues by geographical area for the year ended December 31, 2016 were 26.9% for the Americas, 59.3% for Europe and 13.8% for Asia, as compared to 30.4% for the Americas, 57.8% for Europe and 11.8% for Asia, for the same period in 2015, and 31.4% for the Americas, 58.2% for Europe and 10.4% for Asia for the same period in 2014. See "Item 5. Operating and Financial Review and Prospects—A. Operating Results."

Manufacture and Supply

We produce our 3D printed products at our service centers in Belgium, the Czech Republic, Germany, Poland, Japan and the United States. We print substantially all of products in-house using a variety of technologies, including stereolithography, laser sintering, FDM, PolyJet, powder binding, Multi Jet Fusion, SLM and vacuum casting, and only subcontract the manufacture of products if certain other technologies (such as CNC machined components and metal parts) are required or for capacity balancing purposes. As of December 31, 2016, we operated a total of 144 3D printers and six vacuum casting machines at these service centers, which include distinct areas dedicated to the machinery, quality control, cleaning and labeling of our products. The table below provides selected information about our 3D printers:

Technology	Size	Manufacturer	Number
Stereolithography	Small/Medium Size	3D Systems Corporation	25
	Medium Size	Materialise	3
	Mammoth	Materialise(1)	15
PolyJet	Connex	Stratasys Ltd.	4
FDM	Small Size(2)	Stratasys Ltd.	2
	Medium Size(3)	Stratasys Ltd.	25
	Large Size(4)	Stratasys Ltd.	10
Laser Sintering	Small Size	EOS GmbH	4
	Medium Size	3D Systems Corporation	9
	Medium Size	EOS GmbH	15
	Large Size	EOS GmbH	18
Multi Jet Fusion	Medium Size	HP	1
Powder Binding	Medium Size	3D Systems Corporation	5
Vacuum Casting	Small Size	MCP HEK GmbH	1
	Medium Size	MCP HEK GmbH	2
	Medium Size	SCHUHL	1
	Large Size	MCP HEK GmbH	2

Direct Metal Laser Sintering	Medium Size	EoS GmbH	3
	Medium Size	Concept Laser GmbH	4
	Medium Size	Renishaw	1

(1) We have proprietary stereolithography machines based on our patented curtain coat technologies. The original curtain coat machines had a medium sized build volume. These medium sized machines have subsequently been adapted to become the extra-large sized Mammoth machines.
(2) Small size machines are machines with a build volume of less than 250×250×250 mm.
(3) Medium size machines have a build volume of less than 500×500×500 mm.
(4) Large size machines have a build volume of more than 500×500×500 mm.

As of December 31, 2016, 24 printers produced parts exclusively for our Materialise Medical segment, while the other 120 printers and six vacuum casting machines printed parts for our Industrial Production segment.

As of December 31, 2016, all of our 3D printers and vacuum casting machines were either owned or held under a financial lease. At the end of the lease agreements (which are typically for a period of five years), we have an option to purchase the machines for a value of approximately 1.0% of their original value. We are responsible for the maintenance of such leased equipment.

We devote significant time and attention to the quality control of our products during the printing process by maintaining a comprehensive quality control program, which, among other things, includes the control and documentation of all material specifications, operating procedures, equipment maintenance and quality control methods. In addition, we inspect all of our raw materials to be used in our products throughout the printing process. We control our production orders through the use of labels or visual references on our internal database, bar-codes, controlled prints and routers, which enables us to trace our products during the printing process. Upon completion of the production process, we package and label our products.

The raw materials used in the printing of our products are mainly aluminium and Ti alloy powders epoxy based photocurable resins, PA12 based powders and a suite of thermoplastic filaments like ABS and Ultem.

With the exception of FDM-materials, we believe that none of our other raw material requirements is limited to any significant extent by critical supply or price volatility. We continuously look for second sourcing of our raw materials in order not to be dependent on a single supplier in case a supply issue was to occur. We monitor the costs of our raw materials in order to optimize the cost/performance whilst not jeopardizing the expectations of our customers and the safe use of the materials in critical applications. In 2016, Stratasys was our single supplier for FDM-materials, although we source a broad range of different material grades from Stratasys.

Our 3D printing operations for our patient-specific surgical guides, models and implants are subject to extensive regulation. We operate a certified quality management system in line with the U.S. Quality System Regulation, good manufacturing practice regulations and ISO 13485. We are registered with regulatory authorities in the United States, Europe, Canada, Australia and other jurisdictions. We CE mark our products where required. Our service centers are subject to periodic and sometimes unannounced inspections by regulatory authorities, including inspections by the FDA.

Research and Development

We have an ongoing research and development program to improve and expand the capabilities of our existing technology portfolio, which reflects our continued investments in a range of disciplines, including software development, industrial, mechanical and biomedical engineering, physics and chemistry.

We have a long history of research and development through collaborations, which augment our internal development efforts. Our earliest joint research projects date from the early 1990s with market leading collaboration partners such as Siemens AG, Zeneca and the University of Leuven (*Katholieke Universiteit Leuven*), or KU Leuven. Many of our innovations are based on industrial collaborations such as those with Phonak Staefa Switzerland and Zimmer Biomet. As of December 2016, we were active in 24 government funded research projects. With our platform technologies and strong track record in successful commercialization of scientific innovations, we receive many requests for participation in new development projects. While we strongly protect our intellectual property in our core competencies, many of our products require collaborations in order to create healthy ecosystems for their successful implementation.

As of December 31, 2016, we had more than 60 active research and development projects in various stages of completion and more than 200 FTEs and fully dedicated consultants working on research and development in our facilities in Belgium, France, Germany, Poland, the United Kingdom, Ukraine, China and Malaysia.

For the year ended December 31, 2016, our research and development expenses were €17.7 million, or 15.4% of our revenue, as compared to €18.2 million, or 17.8% of our revenue, in 2015.

Our research and development projects include the following:

1. Various software development projects including projects related to engineering and design for 3D printing, multiplatform applications (for example, applications for Windows, Apple and Android) and improving existing technological challenges (for example, the handling of large amounts of data and advanced image segmentation), which are expected to benefit both our Materialise Software and Materialise Medical segments;

2. A research project to understand and streamline the different additive manufacturing technologies (sintering, stereolithography, FDM and SLM);
3. A research project in our Materialise Medical segment to develop patient specific implants for orthognathic and bone repositioning surgeries;
4. A research project in our Materialise Medical segment that aims at creating 3D printable guides on the basis of x-ray data;
5. Release of a research version of Mimics software that allows post-operative analysis of implant placement using x-ray data;
6. A research project in our Materialise Medical segment regarding automation of segmentation of medical images and using them for population analysis;
7. Continued investment in our Materialise Manufacturing segment in our RapidFit+ and i.materialise businesses; and
8. Several research projects related to improving the maturity, reliability and quality of the additive manufacturing process, which are expected to benefit our three segments.

We also regularly apply for research and development grants and subsidies under European, Belgian, British, French, German and Czech grant rules. The majority of these grants and subsidies are non-refundable. We have received grants and subsidies from different authorities, including the Flemish government (VLAIO, or Vlaams Agentschap Innoveren en Ondernemen, the former IWT) and the European Union (FP7 and H2020 framework programs).

We expect to continue to invest significantly in research and development in the future.

Intellectual Property

We regard our intellectual property rights as valuable to our business and protect our technology portfolio through a combination of patent, copyright, trademark, trade secret and other intellectual property laws, confidentiality and other contractual provisions and other measures. The nature and extent of legal protection associated with each such intellectual property right depends on, among other things, the type of intellectual property right and the given jurisdiction in which such right arises.

As of December 31, 2016, our portfolio of intellectual property features 180 issued patents and an additional 192 pending patent applications primarily in the United States, the European Union and Japan. Of these, our issued patents expire between approximately 2020 and 2035, while our currently pending patent applications will generally remain in effect for 20 years from the date of the initial applications. We believe that, while our patents provide us with a competitive advantage, our success depends primarily on our business development, applications know-how and ongoing research and development efforts. Accordingly, we believe that the expiration of any single patent, or the failure of any single patent application to result in an issued patent, would not be material to our business or financial position.

As is the case in the 3D printing industry generally, the development of our products, processes and materials has required considerable experience, manufacturing and processing know-how and research and development activities. We protect our proprietary products, processes and materials as trade secrets through nondisclosure and confidentiality agreements with our employees, consultants and customers.

In addition, we own the trademark registrations for “Materialise” (Benelux, United States, U.K., International, Malaysia, India and Thailand), and trademark registrations and pending applications for many of our services and software solutions, including “Streamics,” “Mimics,” “3-matic,” “Magics,” “RapidFit+,” “MGX by Materialise,” “Heartprint,” “ADaM,” “Engineering on Anatomy” and “Surgicase,” among others.

We are party to various licenses and other arrangements that allow us to practice and improve our technology under a broad range of patents, patent applications and other intellectual property, including agreements with our collaboration partners, Zimmer Biomet, DJO Surgical, DePuy Synthes, Global Orthopaedic Technology, Lima, Mathys, Stryker, Corin, Siemens and HOYA.

There can be no assurance that the steps we take to protect our proprietary rights will be adequate or that third parties will not infringe or misappropriate such rights. We have been subject to claims and expect to be subject to legal proceedings and claims from time to time in the ordinary course of our business. In particular, we may face claims from third parties that we have infringed their

patents, trademarks or other intellectual property rights. Such claims, even if not meritorious, could result in the expenditure of significant financial and managerial resources. Any unauthorized disclosure or use of our intellectual property could make it more expensive to do business and harm our operating results.

Seasonality

Although end markets such as healthcare, automotive, aerospace and consumer products may experience some seasonality, the historical impact of seasonality on the revenue of our Materialise Manufacturing and Materialise Medical segments has not been material. Historically, the revenue of our Materialise Software segment has been greater in the fourth quarter, as compared to the revenue of each of the other quarters. A number of our customers make their initial software purchase in the fourth quarter prior to the end of their annual budget cycle and tend to renew, extend or broaden the scope of their licenses on the anniversary date of their first purchase. In addition, we have in the past often brought new releases on the market in the third quarter of the calendar year, which may also have an impact on sales in the subsequent quarter.

Regulatory / Environmental Matters

Environmental Matters

Our facilities and operations are subject to extensive U.S. federal, state and local, European and other applicable foreign environmental and occupational health and safety laws and regulations. These laws and regulations govern, among other things, air emissions; wastewater discharges; the generation, storage, handling, use and transportation of hazardous materials; the handling and disposal of hazardous wastes; the cleanup of contamination; and the health and safety of our employees. Under such laws and regulations, we are required to obtain permits from governmental authorities for some of our operations. If we violate or fail to comply with these laws, regulations or permits, we could be fined or otherwise sanctioned by regulators. We could also be held responsible for costs and damages arising from any contamination at our past or present facilities or at third-party waste disposal sites.

Compliance with laws and regulations relating to the discharge of materials into the environment or otherwise relating to the protection of the environment has not had a material impact on capital expenditures, earnings or the competitive position of our subsidiaries and us. We are not the subject of any legal or administrative proceedings relating to the environmental laws of Belgium or any country in which we have facilities. We have not received any notices of any violations of any such environmental laws.

Healthcare Regulatory Matters

In our Materialise Medical segment, we are subject to extensive and complex U.S. federal, state and local, European and other applicable foreign healthcare and medical devices laws and regulations.

Both before and after approval or clearance our medical products and product candidates are subject to extensive regulation. In the United States, the FDA under the Federal Food, Drug and Cosmetic Act primarily regulates us. In Europe and in other foreign jurisdictions in which we sell our medical products, many of the regulations applicable to our medical devices and products in these countries are similar to those of the FDA. Together, these regulations govern, among other things and where applicable, the following activities in which we are involved:

- product development;
- product testing;
- product clinical trial compliance;
- product manufacturing;
- product labeling and instructions for use;
- product safety, product safety reporting, recalls and field corrective actions;
- product packaging and storage;

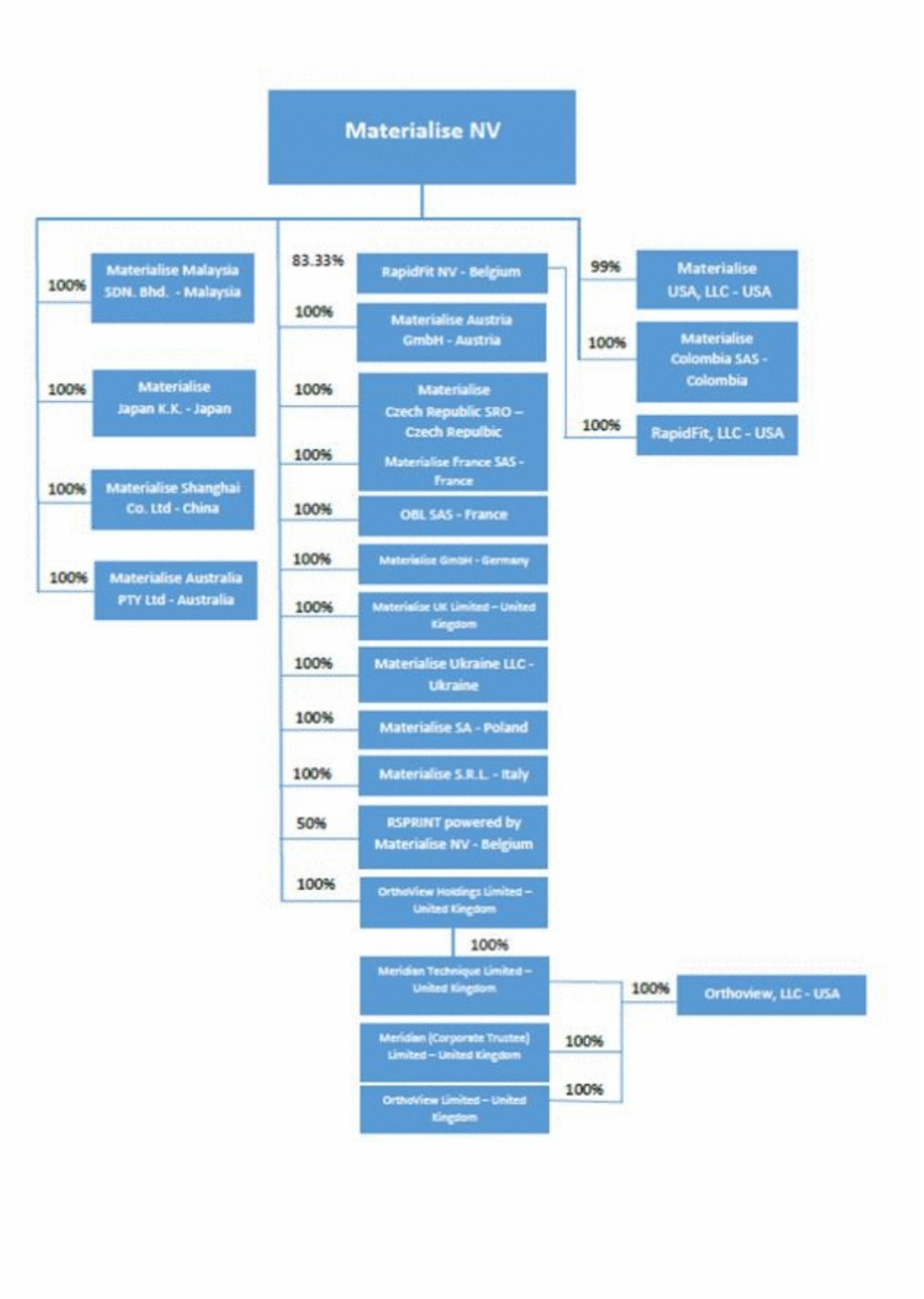
- product registration, market clearance or approval;
- product modifications;
- product marketing, advertising and promotion;
- product import and export, restrictions, tariff regulations, duties and tax requirements;
- product sales and distribution;
- post-market surveillance, including reporting of deaths or serious deterioration in the state of health and malfunctions that, if they were to recur, could lead to death or serious deterioration in the state of health;
- record keeping procedures;
- registration for reimbursement; and
- necessity of testing performed in country by distributors for licenses.

Failure to comply with the Federal Food, Drug and Cosmetic Act could result in, among other things, warning letters, civil penalties, delays in approving or refusal to approve a medical device candidate, product recall, product seizure, interruption of production, operating restrictions, suspension or withdrawal of product approval, injunctions or criminal prosecution. In non-U.S. countries, failure to comply with applicable laws and regulations could result in similar actions, and in the suspension or withdrawal of Quality Management System certification which may be a prerequisite to market medical devices.

The time required to obtain clearance required by foreign countries may be longer or shorter than that required for FDA clearance, and requirements for licensing a product in a foreign country may differ significantly from FDA requirements.

C. Organizational Structure

The following illustrates our corporate structure as of the date of this annual report:


Materialise NV
100%
Materialise Malaysia SDN. Bhd. - Malaysia
100%
Materialise Japan K.K. - Japan
100%
Materialise Shanghai Co. Ltd - China
100%
Materialise Australia PTY Ltd - Australia
83.33%
RapidFit NV - Belgium
100%
Materialise Austria GmbH - Austria
100%
Materialise Czech Republic SRO – Czech Republic
100%
Materialise France SAS - France
100%
OBL SAS - France
100%
Materialise GmbH - Germany
100%
Materialise UK Limited – United Kingdom
100%
Materialise Ukraine LLC - Ukraine
100%
Materialise SA - Poland
100%
Materialise S.R.L. - Italy
50%
RSPRINT powered by Materialise NV - Belgium
100%
OrthoView Holdings Limited – United Kingdom
99%
Materialise USA, LLC - USA
100%
Materialise Colombia SAS - Colombia
100%
RapidFit, LLC - USA
100%
Meridian Technique Limited – United Kingdom
100%
Orthoview, LLC - USA
100%
Meridian (Corporate Trustee) Limited – United Kingdom
100%
OrthoView Limited – United Kingdom

RapidFit NV Shareholders' Agreement

On June 27, 2013, we entered into a shareholders' agreement with PMV-TINA Comm.VA, or PMV, with respect to our subsidiary RapidFit NV, of which we own 83.33% and PMV owns 16.66%. Pursuant to the agreement, we have the right to appoint four out of the five members of the board of directors and PMV has the right to appoint one director, who has approval rights for certain company decisions and transactions, including with respect to certain acquisitions, dispositions or pledges of assets, the budget, officers, and issuance or offering of shares of RapidFit NV. The shareholders' agreement contains provisions regarding restrictions against the transfer of shares, put and call options, anti-dilution warrants, liquidation preference, tag along rights and drag along rights. For additional information regarding the accounting treatment of the put and call options and warrants, see Note 11 to our audited consolidated financial statements.

D. Property, Plants and Equipment

Our corporate headquarters and our largest 3D printing service center are located in Leuven, Belgium. We currently own office and service spaces in Belgium as well as in the Czech Republic, France and the United States. We also lease other service centers and sales offices, which are located in Austria, China, France, Germany, Japan, Malaysia, Ukraine, the United Kingdom, the United States, Poland, Colombia, Australia and Italy. The aggregate annual lease payments for our facilities in 2016, 2015 and 2014 were €1.6 million, €1.2 million and €1.2 million, respectively. The table below provides selected information regarding our facilities.

Location	Ownership	Use	Approximate Area	Lease Expiration
Leuven, Belgium*	Owned	Corporate headquarters; production	34,593 sq. m.	N/A
Plymouth, Michigan, United States	Owned	Office; production; parking	3.89 acres	N/A
Northville, Michigan, United States	Owned	Condo	1,072 sq. ft.	N/A
Sterling Heights, Michigan, United States	Leased	Office; production	14,235 sq. ft.	April 30, 2020
Saint Marcel les Valence, France	Owned	Office	1,100 sq. m.	N/A
Yokohama, Japan	Leased	Office	343 sq. m.	March 31, 2018
Kawasaki, Japan	Leased	Production	205 sq. m.	May 14, 2018
Ústí nad Labem, Czech Republic	Owned	Office; production	16,013 sq. m.	N/A
Vienna, Austria	Leased	Office	34 sq. m.	December 31, 2021
Gilching, Germany	Leased	Office	399 sq. m.	December 31, 2021
Bremen, Germany	Leased	Office	499 sq. m.	October 31, 2018
Bremen, Germany	Leased	Office; production	628 sq. m.	Indefinite term
Petaling Jaya, Malaysia	Leased	Office	13,935 sq. ft.	May 31, 2019
Chatillon, France	Leased	Office	545 sq. m.	September 30, 2025
Kiev, Ukraine	Leased	Office	2,680 sq. m.	June 28, 2018
Sheffield, United Kingdom	Leased	Office	1,950 sq. ft.	January 31, 2018 (partially) and November 30, 2017 (partially)
Southampton, United Kingdom	Leased	Office	1,999 sq. m.	August 6, 2018
Shanghai, China	Leased	Office	1,200 sq. m	June 8, 2019
Medellin, Colombia	Leased	Office	120 sq. m.	December 1, 2017
Wroclaw, Poland*	Leased	Office; production	1,037 sq. m.	August 31, 2017
Sydney, Australia	Leased	Office	30 sq. m.	August 31, 2017
Milan, Italy	Leased	Office	43 sq. m.	November 30, 2020

* In Belgium, we have acquired additional land (with a surface area of 13,500 sq. m.) and have started construction on an expansion of our existing office building with additional office and production space (10,000 sq. m.). The targeted date for the start of usage of the new office space is July 2017. In Poland, we acquired land (with a surface area of 2.3975 hectare) and have started construction on a new office building with additional office and production space (10,000 sq.m.). The targeted date for the start of usage of the new office space is July 2017.

See also "—B. Business Overview—Manufacture and Supply" for information about the printers we operate and "—Regulatory / Environmental Matters—Environmental Matters" for information about environmental matters and "Item 5. Operating and Financial Review and Prospects—B. Liquidity and Capital Resources—Indebtedness" for more information about indebtedness secured by mortgages.

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

The following discussion and analysis should be read in conjunction with the information set forth in "Item 3. Key Information—A. Selected Financial Data," and our consolidated financial statements and accompanying notes included elsewhere herein.

This section contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those contained in forward-looking statements. Factors that could cause or contribute to such differences include, without limitation, those discussed in the sections entitled "Item 3. Key Information—D. Risk Factors," "Special Note Regarding Forward-Looking Information" and "Item 4. Information on the Company—A. Business Overview" and elsewhere in this annual report.

A. Operating Results

Overview

Company Overview

We are a leading provider of additive manufacturing and medical software and of sophisticated 3D printing services. Our customers are active in a wide variety of industries, including healthcare, automotive, aerospace, art and design and consumer products. Since our founding in 1990 by our Chief Executive Officer, Wilfried Vancraen, we have consistently focused on developing innovative applications of additive manufacturing technologies. We believe our proprietary software platforms, which enable and enhance the functionality of 3D printers and of 3D printing operations, have become a market standard for professional 3D printing. We believe that our commitment to enabling 3D printing technologies has significantly supported and accelerated the acceptance and proliferation of additive manufacturing and will continue to play an instrumental role as the industry evolves. In the healthcare sector, our technology is responsible for the design and manufacture of customized, patient-specific medical devices that includes both surgical guides (and related bone models) as well as customized implants. In our 3D printing service centers, including what we believe to be the world's largest single-site additive manufacturing service center in Leuven, Belgium, we print medical devices, prototypes, production parts, and consumer products. As of December 31, 2016, our team consisted of 1,432 FTEs and fully dedicated consultants. Our portfolio of intellectual property featured 180 patents and 192 pending patent applications as of December 31, 2016. For the year ended December 31, 2016, we generated €114.5 million of revenue, representing 12.2% growth over the prior year, net loss of €3.0 million and Adjusted EBITDA of €9.5 million. For a description of Adjusted EBITDA and a reconciliation of our net profit to our Adjusted EBITDA, see "—Other Financial Information" below.

Seasonality

Although end markets such as healthcare, automotive, aerospace and consumer products may experience some seasonality, the historical impact on our Materialise Medical and Materialise Manufacturing segments has not been material. Historically, the revenue of our Materialise Software segment have been stronger in the fourth quarter of the calendar year (which is also our fiscal year) as compared to the revenue of each of the other quarters. A number of our customers have purchased their first release in the fourth quarter and tend to renew, extend and/or broaden the scope of their license on the anniversary date of their first purchase. In addition, we have in the past often released new software products and versions in the third quarter of the calendar year, which may also have an impact on sales in the subsequent quarter.

Growth Strategy

In our Materialise Software segment, we expect that the demand for software platforms such as ours, which interface with virtually all 3D printers, is likely to grow as sales of 3D printing systems, in particular for professional use, continue to grow. We believe that we can continue to increase the market penetration of our software platforms by expanding relationships with OEMs as well as with industrial users of 3D printers. In order to be able to do so, we intend to bring our teams closer to our customer base worldwide, which will require important investments in the expansion of our marketing and sales presence. In order to be able to meet, in particular, the demands of new entrants to the addictive manufacturing market, we intend to also invest significantly in the development of our software products, including in order to further their compatibility with the hardware and software of as many as possible other players in the ecosystem. On March 10, 2015, we acquired the Belgian-based company Cenat BVBA. With Cenat BVBA's proprietary technology on machine control, we have added new software solutions for ensuring adequate quality control in additive manufacturing production processes.

In our Materialise Medical segment, we intend to invest significantly in the development of new clinical services offerings, in both large scale and specialty markets, because we believe that there are growth opportunities for new applications and because we acknowledge that some of our collaboration partners will bring their own solutions to the market replacing certain of our current product offerings. We also intend to further target the hospital market even more than in the past and have re-oriented our sales force and expanded our product portfolio in line with this strategy. Because customized medical products and treatments can only be brought to the market in compliance with very strict regulatory requirements, we believe there is an opportunity for providers of safe medical software tools, such as our company, that can pass significant regulatory scrutiny. In order to form the basis of stable annual revenue growth in the longer term, we have transitioned from a perpetual to a time-based license model for certain of our medical software products.

In our Materialise Manufacturing segment, we believe that demand for 3D printing services will continue to grow. We believe that there is particular potential to grow our presence in the markets for additive manufacturing of end products (in particular industrial end parts, such as fixtures for the automotive industry). For industrial end parts, we intend to continue to invest in the expansion and creation of certified 3D manufacturing environments that meet the high standards of the specialized segments of the industrial market that we focus on. In addition, we believe that the cooperation between our local sales teams, which are in close proximity to our customers, and our engineering teams, which can bring in additional expertise where required, is an important asset to further increase our customer base. We believe that, in the highly consolidated and still consolidating automotive market, a high added value technology such as ours can be a driver for the consolidation of the currently fragmented submarket of measurement fixtures. We have further integrated i.materialise in our Materialise Manufacturing segment. We engage in co-creation sessions with a limited number of carefully chosen partners who have the intention of transforming their manufacturing ecosystem through the use of 3D printing. Our partnership with HOYA is a good example of the result of these co-creation sessions. We believe that there is potential for similar partnerships in other markets.

Recent Developments

There has been no other significant change in our financial condition or results of operations since December 31, 2016.

Key Income Statement Items

Revenue

Revenue is generated primarily by the sale of our software and 3D printed products and services.

In our Materialise Software segment, we generate revenues from software licenses, maintenance contracts and custom software development services and sales of Materialise Controller.

In our Materialise Medical segment, we generate revenue through the sale of medical devices that we print for our customers and from the sale of licenses on our medical software packages, software maintenance contracts and custom software development and engineering services.

In our Materialise Manufacturing segment, we generate revenue through the sale of parts that we print for our customers.

Software. Software revenue is comprised of perpetual and time-based licenses, maintenance revenue and software development service fees. Our software products are mainly licensed pursuant to one of two payment structures: (i) perpetual licenses, for which the customer pays an initial fee for a perpetual license and subsequently pays fees for maintenance under separate maintenance contracts, generally on an annual basis, or (ii) time-based licenses (generally annual licenses), for which the customer pays equal periodic fees to keep the license active. Perpetual licenses require the payment of fees for maintenance, technical support and product updates. Time-based licenses entitle the customer to corrective maintenance and product updates without additional charge. We generally recognize revenue from our time-based licenses and our maintenance revenue ratably on a straight-line basis over the term of the applicable license or maintenance contracts. Our software revenue depends upon both incremental sales of software licenses to both new and existing customers and renewals of existing time-based licenses and maintenance contracts. Sales and renewals are also driven by our customers' usage and budget cycle. Software development services are typically charged either on a time and materials basis or on a fixed fee basis.

3D printed products and services. 3D printed products revenue is derived from our network of 3D printing service centers. Our service centers not only utilize our 3D printing technology to print products but are also full-service operations that provide support and services such as pre-production collaboration prior to printing the product. Revenue from 3D printed products depends upon the volume of products that we print for our customers. Sales of these products are linked to the number of our 3D printing machines that are installed and active worldwide. We have dedicated teams and production lines for industrial applications and medical applications. All medical products require a highly regulated production environment. Whereas both segments use the same 3D printing technologies, the complex combination of our engineering and software solutions in connection with medical applications results in higher margins for our medical applications.

Cost of Sales

Our cost of sales includes raw materials, external subcontracting services, labor costs, manufacturing overhead expenses, depreciation and reserves for inventory obsolescence. Our manufacturing overhead expenses include quality assurance, manufacturing engineering, material procurement, inventory control, facilities, equipment and information technology and operations supervision and management.

Research and Development Expenses

Our research and development activities primarily consist of engineering and research programs associated with our products under development as well as research and development activities associated with our core technologies and processes. Research and development expenses are primarily related to employee compensation, including salary, fringe benefits, share-based compensation and temporary employee expenses. We also incur expenses for software and materials, supplies, costs for facilities and equipment, depreciation, and outside design and outside research support.

Development expenditures on an individual project are recognized as an intangible asset when we can demonstrate:

- the technical feasibility of completing the intangible asset so that the asset will be available for use or sale;
- the intention to complete and the ability to use or sell the asset;
- how the asset will generate future economic benefits;
- the availability of resources to complete the asset; and
- the ability to measure reliably the expenditure during development.

We have determined that the conditions for recognizing internally generated intangible assets from proprietary software, surgical guide and other product development activities are not met until shortly before the products are available for sale, unless the development is done based upon specific request of the customer and subject to an agreement. As such, development expenditures not satisfying the above criteria and expenditures on the research phase of internal projects are recognized in the consolidated income statement as incurred.

Sales and Marketing Expenses

Our sales and marketing expenses primarily consist of employee compensation, including salary, fringe benefits and share-based compensation for our marketing, sales and business development functions. Other significant expenses include travel, depreciation, product demonstration samples, brochures, websites and trade show expenses.

General and Administrative Expenses

Our general and administrative expenses primarily consist of employee compensation, including salary, fringe benefits and share-based compensation for our executive, financial, human resources, information technology support and regulatory affairs and administrative functions. Other significant expenses include outside legal counsel, independent auditors and other outside consultants, insurance, facilities, depreciation and information technologies expenses.

Other Operational Income

Other operating income mainly consists of government grants, withholding tax exemptions for qualifying researchers and recharges of costs incurred for third parties. The government grants are directly related to our research and development effort conducted in our business segments or in our central research and development department. Similarly, the withholding tax exemptions are granted as a cost reduction for qualifying researchers, and are as such directly related to the level of research and development activity.

Government grants are recognized as income on a systematic basis over the periods in which we recognize expenses for the related costs for which the grants are intended to compensate.

Financial Expenses

Our financial expenses primarily include costs associated with our interest payments on our debt obligations.

Critical Accounting Policies and Accounting Estimates

The preparation of our consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities for future periods.

On an ongoing basis, we evaluate our estimates, assumptions and judgments, including those related to revenue recognition, development expenses, share-based payment transactions, income taxes, impairment of goodwill, intangible assets and property, plant & equipment and business combinations.

We based our assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising beyond our control. Such changes are reflected in the assumptions when they occur.

Revenue Recognition

For revenue recognition, the significant estimates and judgments relate to allocation of value to our separate elements in our multiple-element arrangements and in identifying stage of completion of our customized development of software components for customers. Software development services are mostly billed on a time and material basis or occasionally on a fixed fee basis.

With respect to the allocation of value to the separate elements, we are using the stand-alone selling prices or management's best estimates of selling prices to estimate the fair value of the software and software-related services to separate the elements and account for them separately. Elements in such an arrangement are also sold on a stand-alone basis and stand-alone selling prices are available. Revenue is allocated to each deliverable based on the fair value of each individual element and is recognized when the revenue recognition criteria described above are met. When we provide software development services considered essential to the functionality of the software, we recognize revenue from the software development services as well as any related software licenses on a percentage of completion basis whereby the arrangement consideration is recognized as the services are performed, as measured by an observable input.

We determine the percentage-of-completion by comparing labor hours incurred to-date to the estimated total labor hours required to complete the project. We consider labor hours to be the most reliable, available measure of progress on these projects. Adjustments to estimates to complete are made in the periods in which facts resulting in a change become known. When the estimate indicates that a loss will be incurred, such loss is recorded in the period identified. Significant judgments and estimates are involved in determining the percent complete of each contract. Different assumptions could yield materially different results.

Our revenue recognition policies require management to make significant estimates. Management analyzes various factors, including a review of specific transactions, historical experience, creditworthiness of customers and current market and economic conditions. Changes in judgments based upon these factors could impact the timing and amount of revenue and cost recognized and thus affects our results of operations and financial condition.

Development Expenses

Under International Accounting Standards 38, or IAS 38, internally generated intangible assets from the development phase are recognized if certain conditions are met. These conditions include the technical feasibility, intention to complete, the ability to use or sell the asset under development, and the demonstration of how the asset will generate probable future economic benefits. The cost of a recognized internally generated intangible asset comprises all directly attributable cost necessary to make the asset capable of being used as intended by management. In contrast, all expenditures arising from the research phase are expensed as incurred.

Determining whether internally generated intangible assets from development are to be recognized as intangible assets requires significant judgment, particularly in determining whether the activities are considered research activities or development activities, whether the product enhancement is substantial, whether the completion of the asset is technically feasible considering a company-specific approach and the probability of future economic benefits from the sale or use.

Management has determined that the conditions for recognizing internally generated intangible assets from our software development activities are not met until shortly before the developed products are available for sale unless the development is done based upon specific request of the customer and subject to an agreement. As such, development expenditures not satisfying the above criteria and expenditures on the research phase of internal projects are recognized in the consolidated income statement as incurred. This assessment is monitored by us on a regular basis.

Share-Based Payment Transactions

We measure the cost of equity-settled transactions with employees by reference to the fair value of the equity instruments at the date at which they are granted and measured the cost of cash-settled transactions by reference to the fair value of the equity instrument at the date of reporting. We have applied the Black-Scholes valuation model to estimate fair value. Using this model requires management to make assumptions with regards to volatility and expected life of the equity instruments. The assumptions used for estimating fair value for share-based payment transactions are disclosed in Note 13 to our consolidated financial statements and are estimated as follows:

- Volatility is estimated based on the average annualized volatility of our company and of a number of quoted peers in the 3D printing industry;
- Estimated life of the warrant is estimated to be until the first exercise period which is typically the month after their vesting;
- Fair value of the shares is determined based on the price of our ADSs on NASDAQ at the date of issuance. For the grants prior to the initial public offering, the fair value of the shares was estimated based on a discounted cash flow model with three-year cash flow projections and a multiple of EBITDA determined based on a number quoted peers in the 3D printing industry.
- The dividend return is estimated by reference to the historical dividend payment of our company. Currently, this is estimated to be zero as no dividends have been paid since inception.

Income Taxes

Deferred tax assets are recognized for unused tax losses to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits together with future tax planning strategies.

As of December 31, 2016, we had €9.5 million (2015: €12.2 million; 2014: €10.3 million) of tax losses carry forward and other tax credits such as investment tax credits and notional interest deduction, of which €1.6 million related to Materialise NV (2015: €2.0 million; 2014: €3.6 million). These losses relate to Materialise NV and subsidiaries that have a history of losses, do not expire, except for the notional interest deduction of €0.3 million in 2016 (2015: €0.4 million; 2014: €0.3 million) and may not be used to offset taxable income elsewhere our consolidated group.

With respect to the unused tax losses of Materialise NV, no deferred tax assets have been recognized in 2016, 2015 or 2014, given that it in view of the Belgian Patent Income Deduction there is an uncertainty to what extent these tax losses will be used in future years. The Belgian Patent Income Deduction allows companies to deduct 80% of the qualifying gross patent income from the taxable basis. Currently we are preparing a detailed analysis of our tax situation and tax planning. Once this analysis has been finalized, we will on which basis reassess the need for a valuation allowance on the deferred tax assets.

With respect to the unused tax losses and credits of our subsidiaries, deferred tax assets have been recognized for €0.1 million only (2015: €0.9 million; 2014: €58,000). We have not recognized deferred tax assets on unused tax losses totaling €8.9 million in 2016 (2015: €9.7 million; 2014: €9.2 million) given that it is not probable that sufficient positive taxable base will be available in the foreseeable future against which these tax losses can be utilized.

If we were able to recognize all unrecognized deferred tax assets, net profit would have increased by €3.0 million in 2016, in which €0.8 million of tax losses were utilized. Further details on taxes are disclosed in Note 20 to our consolidated financial statements.

Impairment of Goodwill, Intangible Assets and Property, Plant & Equipment

We had goodwill for a total amount of €8.9 million as of December 31, 2016 (2015: €9.7 million; 2014: €7.7 million) which has been subject to an impairment test. Goodwill is tested for impairment based on a discounted cash flow model with cash flows for the next five years derived from the budget and a residual value considering a perpetual growth rate. The value in use is sensitive to the discount rate used for the discounted cash flow model as well as the expected future cash-inflows and the growth rate used for extrapolation purposes. The key assumptions used to determine the value in use for the different cash generating units, or CGUs, are disclosed and further explained in Note 5 to our consolidated financial statements.

When events or changes in circumstances indicate that the carrying amount of the intangible assets and property, plant and equipment may not be recoverable, we estimate the value in use for the individual assets, or when not possible, at the level of CGUs to which the individual assets belong. No impairment charges were recorded during 2016 (2015: €0.1 million; 2014: € nil).

Business Combinations

We determine and allocate the purchase price of an acquired business to the assets acquired and liabilities assumed as of the business combination date. The purchase price allocation process requires us to use significant estimates and assumptions, including

- estimated fair value of the acquired intangible assets;
- estimated fair value of property, plant and equipment; and
- estimated fair value of the contingent consideration.

The contingent consideration as included in the financial statements is recorded at fair value at the date of acquisition and is reviewed on a regular basis, at least annually. The fair value of the contingent consideration is based on risk-adjusted future cash flows of different scenarios discounted using appropriate interest rates. The structure of the possible scenarios and the probability assigned to each one of them is reassessed by management at every reporting period and requires judgement from management about the outcome and probability of the different scenarios as well as the evolution of the variables.

While we are using our best estimates and assumptions as part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the date of acquisition, our estimates and assumptions are inherently uncertain and subject to refinement. Examples of critical estimates in valuing certain of the intangible assets we have acquired or may acquire in the future include but are not limited to:

- future expected cash flows from customer contracts and relationships, software license sales and maintenance agreements;
- the fair value of the plant and equipment
- the fair value of the deferred revenue; and
- discount rates.

Recent Accounting Pronouncements

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of our financial statements are disclosed in our financial statements included elsewhere in this annual report. We believe the following standards may have an effect on our results of operations or financial position:

IFRS 9 Financial Instruments

In July 2014, the IASB issued the final version of IFRS 9 Financial Instruments that replaces IAS 39 Financial Instruments: Recognition and Measurement and all previous versions of IFRS 9. IFRS 9 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. IFRS 9 is effective for annual periods beginning on or after January 1, 2018, with early application permitted. Except for hedge accounting, retrospective application is required but providing comparative information is not compulsory. For hedge accounting, the requirements are generally applied prospectively, with some limited exceptions.

IFRS 9 requires us to record expected credit losses on all of our debt securities, loans and trade receivables, either on a 12-month or lifetime basis. We expect to apply the simplified approach and record lifetime expected losses on all trade receivables.

We plan to adopt the new standard on the required effective date. We expect no significant impact on our balance sheet and equity.

IFRS 15 Revenue from Contracts with Customers

IFRS 15 was issued in May 2014 and establishes a five-step model to account for revenue arising from contracts with customers. Under IFRS 15, revenue is recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer.

The standard provides a single, principles based five step model to be applied to all contracts with customers as follows:

- Identify the contract(s) with a customer;
- Identify the performance obligations in the contract;
- Determine the transaction price;
- Allocate the transaction price to the performance obligations in the contract; and
- Recognize revenue when (or as) the entity satisfies a performance obligation.

The new revenue standard will supersede all current revenue recognition requirements under IFRS. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018. We plan to adopt the new standard on the required effective date. We have performed a preliminary assessment of IFRS 15, which is subject to changes arising from a more detailed ongoing analysis. Once the analysis is performed, the transition method will be chosen. Based on the current sales contracts, both methods are feasible from implementation perspective and we do not expect a significant impact in the implementation. Furthermore, we are considering the clarifications issued by the IASB in April 2016 and will monitor any further developments.

We will continue to assess individual contracts to determine the performance obligations included, relating to licenses and royalty based sales, maintenance and support services and the estimated variable considerations and related constraints.

IFRS 15 provides presentation and disclosure requirements, which are more detailed than under current IFRS. The presentation requirements represent a significant change from current practice and significantly increases the volume of disclosures required in our financial statements. Many of the disclosure requirements in IFRS 15 are completely new. In 2016 we developed and started testing appropriate systems, internal controls, policies and procedures necessary to collect and disclose the required information.

Our directors are currently reviewing the impact of the implementation of IFRS 15 and have yet to conclude on whether it will have a significant impact on our financial statements in the year of initial application. This analysis is expected to be finalized in the last quarter of 2017.

IFRS 16, Leases

IFRS 16 was issued in January 2016 and it replaces IAS 17 Leases, IFRIC 4 Determining whether an Arrangement contains a Lease, SIC-15 Operating Leases-Incentives and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model similar to the accounting for finance leases under IAS 17. The standard includes two recognition exemptions for lessees – leases of 'low-value' assets (e.g., personal computers) and short-term leases (i.e., leases with a lease term of 12 months or less). At the commencement date of a lease, a lessee will recognize a liability to make lease payments (i.e., the lease liability) and an asset representing the right to use the underlying asset during the lease term (i.e., the right-of-use asset). Lessees will be required to separately recognize the interest expense on the lease liability and the depreciation expense on the right-of-use asset.

Lessees will be also required to remeasure the lease liability upon the occurrence of certain events (e.g., a change in the lease term, a change in future lease payments resulting from a change in an index or rate used to determine those payments). The lessee will generally recognize the amount of the remeasurement of the lease liability as an adjustment to the right-of-use asset.

IFRS 16 is effective for annual periods beginning on or after January 1, 2019, subject to endorsement by the European Union. Early application is permitted, but not before an entity applies IFRS 15. A lessee can choose to apply the standard using either a full retrospective or a modified retrospective approach. The standard's transition provisions permit certain reliefs. We are however not intending to early adopt this standard.

During 2017 we plan to assess the potential effect of IFRS 16 on our consolidated financial statements. To see the volume of operating leases, please refer to Note 22 of our financial statements included elsewhere in this annual report.

Other Financial Information

We believe EBITDA and Adjusted EBITDA are meaningful measures to our investors to enhance their understanding of our financial performance. Although EBITDA and Adjusted EBITDA are not necessarily a measure of our ability to fund our cash needs, we understand that it is frequently used by securities analysts, investors and other interested parties as a measure of financial performance and to compare our performance with the performance of other companies that report EBITDA or Adjusted EBITDA. Our calculation of EBITDA and Adjusted EBITDA may not be comparable to similarly titled measures reported by other companies.

We calculate EBITDA as net profit plus income taxes, financial expenses (less financial income), depreciation and amortization, and share in loss of joint venture. We calculate Adjusted EBITDA by adding non-recurring initial public offering related expenses and non-cash stock-based compensation expenses to EBITDA. Disclosure in this annual report of EBITDA and Adjusted EBITDA, which are non-IFRS financial measures, is intended as a supplemental measure of our performance that is not required by, or presented in accordance with, IFRS. EBITDA and Adjusted EBITDA should not be considered as alternatives to net profit or any other performance measure derived in accordance with IFRS. Our presentation of EBITDA and Adjusted EBITDA should not be construed to imply that our future results will be unaffected by unusual or non-recurring items.

Reconciliation of Net Profit to Adjusted EBITDA (unaudited) on a Consolidated Basis

	For the year ended December 31		
in 000€	**2016**	**2015**	**2014**
Net profit	(3,019)	(2,860)	1,872
Income taxes	1,710	(389)	387
Financial expenses	2,437	2,470	1,150
Financial income	(2,039)	(3,511)	(3,160)
Depreciation and amortization	8,374	6,810	4,565
Share in loss of joint venture	1,018	401	81
EBITDA (unaudited)	**8,481**	**2,921**	**4,895**
Non-recurring initial public offering expenses(1)	—	—	182
Non-cash stock-based compensation expenses(2)	977	766	675
Adjusted EBITDA (unaudited)	**9,458**	**3,687**	**5,752**

(1) Non-recurring initial public offering expenses represent fees and costs incurred in connection with our initial public offering.
(2) Non-cash stock-based compensation expenses represent the cost of equity-settled and cash-settled share-based payments to employees.

Results of Operations

Comparison of the Years Ended December 31, 2016 and 2015

in 000€, except percentages	Notes	For the year ended December 31 2016	2015	% Change
Revenue		114,477	102,035	12.2%
Cost of sales		(46,706)	(42,963)	8.7%
Gross profit		**67,771**	**59,072**	**14.7%**
Research and development expenses		(17,682)	(18,186)	-2.8%
Sales and marketing expenses		(36,153)	(36,832)	-1.8%
General and administrative expenses		(20,041)	(15,045)	33.2%
Net other operating income (expenses)		6,212	7,102	-12.5%
Operating (loss) profit		**107**	**(3,889)**	**-102.8%**
Financial expenses		(2,437)	(2,470)	-1.3%
Financial income		2,039	3,511	-41.9%
Share in loss of joint venture		(1,018)	(401)	153.9%
(Loss) profit before taxes		**(1,309)**	**(3,249)**	**-59.7%**
Income taxes		(1,710)	389	-539.6%
Net (loss) profit		**(3,019)**	**(2,860)**	**5.6%**

Comparison of the Years Ended December 31, 2016 and 2015 by Segment

in 000€, except percentages	Materialise Software	Materialise Medical	Materialise Manufac-turing	Total Segments	Adjustments & Eliminations(1)	Consolidated
For the year ended December 31, 2016						
Revenues	30,122	37,910	46,406	114,438	39	114,477
Segment EBITDA (unaudited)	10,130	894	3,848	14,872	(6,391)	8,481
Segment EBITDA %	33.6%	2.4%	8.3%	13.0%		7.4%

in 000€, except percentages	Materialise Software	Materialise Medical	Materialise Manufac-turing	Total Segments	Adjustments & Eliminations(1)	Consolidated
For the year ended December 31, 2015						
Revenues	25,798	34,856	41,381	102,035	—	102,035
Segment EBITDA (unaudited)	9,093	422	1,645	11,160	(8,239)	2,921
Segment EBITDA %	35.2%	1.2%	4.0%	10.9%		2.9%

(1) Adjustments & Eliminations to Revenues consist of occasional one-off sales by our core competencies not allocated to any of our segments. Adjustments & Eliminations to Segment EBITDA consist of corporate research and development, corporate headquarter costs and other operating income (expense).

Revenue. Revenue was €114.5 million in the year ended December 31, 2016 compared to €102.0 million in the year ended December 31, 2015, an increase of €12.5 million, or 12.2%.

Revenue by geographical area is presented as follows:

	For the year ended December 31,	
in 000€	2016	2015
Americas	30,804	30,990
Europe	67,883	58,939
Asia	15,790	12,106
Total	**114,477**	**102,035**

Revenue generated in Europe increased by €8.9 million, or 15.2%, in the year ended December 31, 2016 compared to the year ended December 31, 2015, mainly as a result of increased revenue in our Materialise Manufacturing and Materialise Medical segments. Revenue generated throughout the Americas remained stable at around €31.0 million in the year ended December 31, 2016 compared to the year ended December 31, 2015. Revenue generated in Asia increased by €3.7 million, or 30.4%, in the year ended December 31, 2016 compared to the year ended December 31, 2015, primarily boosted by the increased revenue in our Materialise Software segment.

Revenue from our Materialise Software segment increased from €25.8 million in the year ended December 31, 2015 to €30.1 million in the year ended December 31, 2016, which represented an increase of €4.3 million, or 16.8%. This growth was primarily fueled by a 24.6% increase in recurrent sales from annual and renewed licenses and maintenance fees. Over the same period, sales of services and manufacturing control platforms increased by 27.8% and 499.0%, respectively.

Revenue from our Materialise Medical segment increased from €34.9 million in the year ended December 31, 2015 to €37.9 million in the year ended December 31, 2016, representing an increase of €3.0 million, or 8.8%. Medical software growth was 7.4%, partner sales growth 4.2%, and direct sales growth 45.2%. Within our medical software department recurrent sales from annual and renewed licenses and maintenance fees increased by 19.6%, while sales of perpetual licenses decreased by 23.4% in line with the new sales model that was introduced in April 2014, whereby, except for research and academic centers, our medical software will generally be offered through time-based licenses (and no longer on a perpetual basis). Recurrent revenues from annual and renewed licenses and maintenance fees represented 64.9% of total medical software revenues in the year ended December 31, 2016, compared to 56.8% in the year ended December 31, 2015.

Revenue from our Materialise Manufacturing segment increased from €41.4 million in the year ended December 31, 2015 to €46.4 million in the year ended December 31, 2016, representing an increase of €5.0 million, or 12.1%. We increased the number of 3D printers dedicated to the Materialise Manufacturing segment from 112 3D printers and six vacuum casting machines at December 31, 2015 to 120 3D printers and six vacuum casting machines at December 31, 2016. Our i.materialise and Rapid Fit businesses, which we previously referred to as our growth businesses, are part of our Materialise Manufacturing segment. Although these activities are becoming more mature, and were fully integrated into the Materialise Manufacturing business lines during the fourth quarter in order to create additional synergies, they have adversely impacted overall profit for the segment. Revenue from our Materialise Manufacturing segment excluding i.materialise and RapidFit (which we sometimes refer to as our "additive manufacturing solutions" business) increased from €34.1 million in the year ended December 31, 2015 to €37.1 million in the year ended December 31, 2016, representing an increase of €3.0 million, or 8.9%. Our additive manufacturing solutions business sold in the years ended December 31, 2015 and 2016 a wide variety of products (most of which were uniquely customized), based on a wide variety of materials and produced by means of multiple 3D printing technologies. In the year ended December 31, 2016, our additive manufacturing solutions business experienced stronger growth in its manufacturing of end parts than in its prototyping activities, with 27.7% and 3.5% growth, respectively.

During the year ended December 31, 2016, and across our various segments, 38.1% of our revenue was derived from Materialise Software and Materialise Medical software licenses and related services, as compared to 37.0% in the year ended December 31, 2015, 40.6% of our revenues was derived from the sale of printed industrial and consumer products, which was identical to the year ended December 31, 2015, and 21.3% of our revenues was derived from the sale of medical devices (guides as well as implants) that were brought to the market together with complex software planning solutions, including royalties and other fees, as compared to 22.5% in the year ended December 31, 2015.

Cost of sales. Cost of sales was €46.7 million in the year ended December 31, 2016 compared to €43.0 million in the year ended December 31, 2015, an increase of €3.7 million, or 8.7%. This increase in cost of sales was primarily attributable to increased salaries and to increases in depreciation expenses.

Gross profit. Mainly as a result of increased efficiency in the Materialise Manufacturing segment, the overall gross profit margin (our gross profit divided by our revenue) increased to 59.2% in the year ended December 31, 2016 from 57.9% in the year ended December 31, 2015. For the year ended December 31, 2016, gross profit of €67.8 million reflected growth of 14.7% compared to the prior year.

Research and development, or R&D, sales and marketing, or S&M, and general and administrative, or G&A, expenses. R&D, S&M and G&A expenses increased, in the aggregate, 5.4% to €73.9 million for the year ended December 31, 2016 from €70.1 million in the year ended December 31, 2015. R&D expenses decreased from €18.2 million to €17.7 million, S&M expenses decreased slightly from €36.8 million to €36.2 million, and G&A expenses increased 33.2% from €15.0 million to €20.0 million. These changes compared to last year primarily reflected the managerial structure and support we have implemented within our S&M and R&D groups to support their significant growth since our initial public offering. A number of employees with mixed roles within these groups have evolved into more managerial/administrative roles, and their cost as well as certain other expenses are now categorized into G&A. This increase of R&D, S&M and G&A expenses in aggregate was mainly attributable to an increase of payroll expenses and an increase in purchases of goods and services.

Net other operating income. Net other operating income decreased from €7.1 million in the year ended December 31, 2015 to €6.2 million in the year ended December 31, 2016. This decrease in other operating income was primarily attributable to a decrease in grants and funding for research and development projects of €0.6 million.

Financial expenses. Financial expenses decreased from €2.5 million in the year ended December 31, 2015 to €2.4 million in the year ended December 31, 2016, a decrease of €0.1 million.

Financial income. Financial income decreased from €3.5 million in the year ended December 31, 2015 to €2.0 million in the year ended December 31, 2016. Of this €2.0 million of financial income, €1.9 million was related to foreign currency exchange gains that should be considered jointly with €1.5 million of foreign currency losses under financial expenses. These were primarily due to foreign exchange fluctuations on the portion of the initial public offering proceeds held in U.S. dollars.

Income taxes. Income taxes in the year ended December 31, 2016 resulted in an expense of €1.7 million, which was a combination of deferred tax bookings, and income taxes due over the result for the period. The income taxes are influenced by research and development tax incentives and patent income deduction (which is a favorable tax regime for income derived from patents).

Net profit. As a result of the factors described above, the net loss was €3.0 million in the year ended December 31, 2016 compared to a net loss of €2.9 million in the year ended December 31, 2015, a decrease of €0.1 million.

EBITDA. As a result of the factors described above, our consolidated EBITDA increased from €2.9 million in the year ended December 31, 2015 to €8.5 million in the year ended December 31, 2016, an increase of €5.6 million, or 193.1%, and our total segment EBITDA increased from €11.2 million in the year ended December 31, 2015 to €14.9 million in the year ended December 31, 2016, an increase of €3.7 million, or 33.3%.

Our Materialise Software segment's EBITDA increased from €9.1 million in the year ended December 31, 2015, to €10.1 million in the year ended December 31, 2016, an increase of €1.0 million, or 11.4%. As a result of accelerated efforts in rolling out new projects, this segment's EBITDA margin (the segment's EBITDA divided by the segment's revenue) decreased from 35.2% for the year ended December 31, 2015 to 33.6% in the year ended December 31, 2016.

Our Materialise Medical segment's EBITDA increased from €0.4 million in the year ended December 31, 2015 to €0.9 million in the year ended December 31, 2016. The segment's EBITDA margin increased from 1.2% in the year ended December 31, 2015 to 2.4% in the year ended December 31, 2016, which was mainly the result of an increase of the segment's gross margin by 7.5% compared to an increase of 4.5% across the segment's operational expenses.

Our Materialise Manufacturing segment's EBITDA increased from €1.6 million in the year ended December 31, 2015 to €3.8 million in the year ended December 31, 2016. The EBITDA of our "additive manufacturing solutions" business (which excludes i.materialise and RapidFit) increased from €4.3 million in the year ended December 31, 2015 to €5.6 million in the year ended December 31, 2016, resulting in EBITDA margins of 15.1% in the year ended December 31, 2016 and 12.5% in the year ended December 31, 2015. This increase in EBITDA was influenced by the increased efficiency in the production process.

Reconciliation of Net Profit to Segment EBITDA

in 000€	For the year ended December 31, 2016	2015
Net profit	**(3,019)**	**(2,860)**
Income taxes	1,710	(389)
Finance costs	2,437	2,470
Finance income	(2,039)	(3,511)
Share in loss of joint venture	1,018	401
Operating profit	**107**	**(3,889)**
Depreciation and amortization	8,374	6,810
Corporate research and development	1,673	2,955
Corporate headquarters costs	8,646	9,700
Other operating income (expense)	(3,928)	(4,416)
Segment EBITDA (unaudited)	**14,872**	**11,160**

Comparison of the Years Ended December 31, 2015 and 2014

in 000€, except percentages	For the year ended December 31 2015	2014	% Change
Revenue	102,035	81,355	25.4%
Cost of sales	(42,963)	(32,396)	32.6%
Gross profit	**59,072**	**48,959**	**20.7%**
Research and development expenses	(18,186)	(15,093)	20.5%
Sales and marketing expenses	(36,832)	(27,543)	33.7%
General and administrative expenses	(15,045)	(11,645)	29.2%
Net other operating income (expenses)	7,102	5,652	25.7%
Operating (loss) profit	**(3,889)**	**330**	**-1278.5%**
Financial expenses	(2,470)	(1,150)	114.8%
Financial income	3,511	3,160	11.1%
Share in loss of joint venture	(401)	(81)	395.1%
(Loss) profit before taxes	**(3,249)**	**2,259**	**-243.8%**
Income taxes	389	(387)	-200.5%
Net (loss) profit	**(2,860)**	**1,872**	**-252.8%**

Comparison of the Years Ended December 31, 2015 and 2014 by Segment

in 000€, except percentages	Materialise Software	Materialise Medical	Materialise Manufac-turing	Total Segments	Adjustments & Eliminations(1)	Consolidated
For the year ended December 31, 2015						
Revenues	25,798	34,856	41,381	102,035	—	102,035
Segment EBITDA (unaudited)	9,093	422	1,645	11,160	(8,239)	2,921
Segment EBITDA %	35.2%	1.2%	4.0%	10.9%		2.9%

in 000€, except percentages	Materialise Software	Materialise Medical	Materialise Manufac-turing	Total Segments	Adjustments & Eliminations(1)	Consolidated
For the year ended December 31, 2014						
Revenues	18,095	30,034	33,222	81,351	4	81,355
Segment EBITDA (unaudited)	6,586	2,917	1,144	10,647	(5,752)	4,895
Segment EBITDA %	36.4%	9.7%	3.4%	13.1%		6.0%

(1) Adjustments & Eliminations to Revenues consist of occasional one-off sales by our core competencies not allocated to any of our segments. Adjustments & Eliminations to Segment EBITDA consist of corporate research and development, corporate headquarter costs and other operating income (expense).

Revenue. Revenue was €102.0 million in the year ended December 31, 2015 compared to €81.4 million in the year ended December 31, 2014, an increase of €20.6 million, or 25.4%. Excluding revenue from OrthoView, which we acquired in October 2014, total revenue increased by 20.9%.

Revenue by geographical area is presented as follows:

	For the year ended December 31,	
in 000€	2015	2014
Americas	30,990	25,511
Europe	58,939	47,358
Asia	12,106	8,486
Total	**102,035**	**81,355**

Revenue generated in Europe increased by €11.6 million, or 24.5%, in the year ended December 31, 2015 compared to the year ended December 31, 2014, mainly as a result of increased revenue in our Materialise Manufacturing and Materialise Medical segments. Revenue generated throughout the Americas increased by €5.5 million, or 21.5%, in the year ended December 31, 2015 compared to the year ended December 31, 2014, primarily as a result of increased revenue in our Materialise Software and Materialise Medical segment. Revenue generated in Asia increased by €3.6 million, or 42.7%, in the year ended December 31, 2014 compared to the year ended December 31, 2013, primarily boosted by the increased revenue in our Materialise Software segment.

Revenue from our Materialise Software segment increased from €18.1 million in the year ended December 31, 2014 to €25.8 million in the year ended December 31, 2015, which represented an increase of €7.7 million, or 42.6%. This growth was primarily fueled by a 44.1% increase in new license sales and a 73.4% increase of OEM-driven sales. Over the same period, our recurring software related revenue (maintenance contracts and renewals of annual licenses) increased by 44.7% and our service revenues increased by 45.2%. In our Materialise Software segment, we consider both our first time annual license sales and our new perpetual license sales as important sources of potential follow on revenue. Our first time annual licenses create potential for renewals, while our perpetual licenses, which are in many instances sold together with the sale of a 3D printer by a manufacturer, not only create potential for future maintenance revenue but are also an important source for follow on sales of additional software modules to the customer. These follow on sales are considered new software sales.

Revenue from our Materialise Medical segment increased from €30.0 million in the year ended December 31, 2014 to €34.9 million in the year ended December 31, 2015, representing an increase of €4.8 million, or 16.1%. Revenue from clinical services (which is derived from the sale of clinical devices, which we bring to the market in combination with software solutions and engineering services) increased by 4.7%, while revenue from the sale of medical software and related services increased by 50.1%. Organically, excluding the revenue of Orthoview, which we acquired in October 2014, medical software growth was 14.5%. Revenue from new medical software licenses (new perpetual licenses and first time annual licenses) and related services increased by 41.7%, while our recurring medical software related revenue (maintenance contracts and renewals of annual licenses) increased by 104.1%. Our medical software is modular, with some modules licensed out as a perpetual license which include a maintenance scheme, while the newer modules are licensed on an annual basis. Since April 2014, we have adopted a new model, whereby, except for research and academic centers, our medical software will only be offered through time-based licenses (and no longer on a perpetual basis).

Revenue from our Materialise Manufacturing segment increased from €33.2 million in the year ended December 31, 2014 to €41.4 million in the year ended December 31, 2015, representing an increase of €8.2 million, or 24.6%. We increased the number of 3D printers dedicated to the Materialise Manufacturing segment from 98 3D printers and six vacuum casting machines at December 31, 2014 to 112 3D printers and six vacuum casting machines at December 31, 2015. i.materialise and Rapid Fit are part of our Materialise Manufacturing segment. As of December 31, 2015, both businesses were in a pre-profitability investment phase, which adversely impacted overall profit for the segment. Revenue from our Materialise Manufacturing segment excluding i.materialise and RapidFit (which we sometimes refer to as our "additive manufacturing solutions" business) increased from €28.1 million in the year ended December 31, 2014 to €34.1 million in the year ended December 31, 2015, representing an increase of €6.0 million, or 21.9%. Our additive manufacturing solutions business sold, in the year ended December 31, 2014 as well as in the same period in 2015, a wide variety of products (most of which are uniquely customized), based on a wide variety of materials and produced by means of multiple 3D printing technologies. In the year ended December 31, 2015, our additive manufacturing solutions business experienced stronger growth in its manufacturing of end parts than in its prototyping activities, with 40.1% and 18.0% growth, respectively.

During the year ended December 31, 2015, and across our various segments, 37.0% of our revenue was derived from Materialise Software and Materialise Medical software licenses and related services, as compared to 32.3% in the year ended December 31, 2014, 40.6% of our revenues was derived from the sale of printed industrial and consumer products, as compared to 40.8% in the year ended December 31, 2014, and 22.5% of our revenues was derived from the sale of medical devices (guides as well as implants) that were brought to the market together with complex software planning solutions, including royalties and other fees, as compared to 27.1% in the year ended December 31, 2014.

Cost of sales. Cost of sales was €43.0 million in the year ended December 31, 2015 compared to €32.4 million in the year ended December 31, 2014, an increase of €10.6 million, or 32.6%. This increase in cost of sales was primarily attributable to increased salaries and to increases in raw materials and external subcontracting services.

Gross profit. As a result of the relatively lower revenue growth in the Materialise Medical segment and the set-up of new production lines in both the Materialise Medical and Materialise Manufacturing segments, the overall gross profit margin (our gross profit divided by our revenue) decreased slightly to 57.9% in the year ended December 31, 2015 from 60.2% in the year ended December 31, 2014. For the year ended December 31, 2015, gross profit of €59.1 million reflected growth of 20.7% compared to the prior year.

Research and development expenses. Research and development expenses were €18.2 million in the year ended December 31, 2015 compared to €15.1 million in the year ended December 31, 2014, an increase of €3.1 million, or 20.5%. This increase in research and development expenses was primarily attributable to an increased investment in medical research projects, which increased by €1.8 million, and software development, which increased by €1.0 million, as compared to the year ended December 31, 2014.

Sales and marketing expenses. Sales and marketing expenses increased from €27.5 million in the year ended December 31, 2014 to €36.8 million in the year ended December 31, 2014, an increase of €9.3 million, or 33.7%. This increase was primarily attributable to an increase in headcount in connection with our efforts to increase our sales volume, resulting in increased payroll expenses related to sales and marketing expenses.

General and administrative expenses. General and administrative expenses were €15.0 million in the year ended December 31, 2015 compared to €11.6 million in the year ended December 31, 2014, an increase of €3.4 million, or 29.2%. This reflects increased investments in corporate functions such as human resources and finance, as well as increased legal, accounting and other services mainly in connection with our operating as a public company subsequent to our initial public offering.

Net other operating income. Net other operating income increased from €5.7 million in the year ended December 31, 2014 to €7.1 million in the year ended December 31, 2015. This increase in other operating income was primarily attributable to an increase in grants and funding for research and development projects of €1.4 million. In the year ended December 31, 2015, €5.4 million out of the €7.1 million net other operating income was a release of grant income directly related to the level of research and development effort, consisting of withholding tax exemptions for qualifying researchers, development grants, and partial funding of research and development contracts, as compared to €3.6 million in the year ended December 31, 2014.

Financial expenses. Financial expenses increased from €1.2 million in the year ended December 31, 2014 to €2.5 million in the year ended December 31, 2015, an increase of €1.3 million.

Financial income. Financial income increased from €3.2 million in the year ended December 31, 2014 to €3.5 million in the year ended December 31, 2015. Of the €3.5 million financial income, €3.1 million is related to foreign currency exchange gains that should be considered jointly with the €1.6 million foreign currency losses under financial expenses. This is primarily due to foreign exchange fluctuations on the portion of the initial public offering proceeds held U.S. dollars.

Income taxes. Income taxes in the year ended December 31, 2015 resulted in an income of €0.4 million, as a combination of deferred tax asset bookings, and small income taxes mainly due to the level of income before tax, and research and development tax incentives and patent income deduction (which is a favorable tax regime for income derived from patents).

Net profit. As a result of the factors described above, net loss was €2.9 million in the year ended December 31, 2015 compared to a net profit of €1.9 million in the year ended December 31, 2014, a decrease of €4.7 million.

EBITDA. As a result of the factors described above, our consolidated EBITDA decreased from €4.9 million in the year ended December 31, 2014 to €2.9 million in the year ended December 31, 2015, a decrease of €2.0 million, or 40.3%, and our total segment EBITDA increased from €10.6 million in the year ended December 31, 2014 to €11.2 million in the year ended December 31, 2015, an increase of €0.5 million, or 4.8%.

Our Materialise Software segment's EBITDA increased from €6.6 million in the year ended December 31, 2014, to €9.1 million in the year ended December 31, 2015, an increase of €2.5 million, or 38.1%. As a result of a 47.2% increase in sales and marketing and research and development expenses, this segment's EBITDA margin (the segment's EBITDA divided by the segment's revenue) decreased from 36.4% for the year ended December 31, 2014 to 35.2% in the year ended December 31, 2015.

Our Materialise Medical segment's EBITDA decreased from €2.9 million in the year ended December 31, 2014 to €0.4 million in the year ended December 31, 2015. The segment's EBITDA margin decreased from 9.7% in the year ended December 31, 2014 to 1.2% in the year ended December 31, 2015, which was mainly the result of an increase of 26.3% across operational expenses compared to the increase in revenues of 16.1%.

Our Materialise Manufacturing segment's EBITDA increased from €1.1 million in the year ended December 31, 2014 to €1.6 million in the year ended December 31, 2015. The EBITDA of our "additive manufacturing solutions" business (which excludes i.materialise and RapidFit) increased from €4.1 million in the year ended December 31, 2014 to €4.3 million in the year ended December 31, 2015, resulting in EBITDA margins of 12.5% in the year ended December 31, 2015 and 14.5% in the year ended December 31, 2014. This decrease in EBITDA was influenced by the increase of cost of sales and the establishment of new production lines.

Reconciliation of Net Profit to Segment EBITDA

in 000€	For the year ended December 31, 2015	2014
Net profit	**(2,860)**	**1,872**
Income taxes	(389)	387
Finance costs	2,470	1,150
Finance income	(3,511)	(3,160)
Share in loss of joint venture	401	81
Operating profit	**(3,889)**	**330**
Depreciation and amortization	6,810	4,565
Corporate research and development	2,955	2,487
Corporate headquarters costs	9,700	6,573
Other operating income (expense)	(4,416)	(3,308)
Segment EBITDA (unaudited)	**11,160**	**10,647**

B. Liquidity and Capital Resources

Prior to our initial public offering, we historically funded our operations principally from cash generated from operations and borrowings. On June 30, 2014, we completed our initial public offering of 8,000,000 ADSs at a price of $12.00 per ADS, and received net proceeds of approximately $88.3 million. As we continue to grow our business, we envision funding our operations through multiple sources, including the remaining proceeds from our initial public offering, future earnings and cash flow from operations and borrowings.

We expect our main uses of cash in the future will be funding our business operations and capital expenditures, as in the past. We believe that we will have sufficient liquidity to satisfy the operating requirements of our business through the next 12 months.

Our liquidity plans are subject to a number of risks and uncertainties, including those described in the section of this annual report titled “Item 3. Key Information—D. Risk Factors,” some of which are outside of our control. Macro-economic conditions could hinder our business plans, which could, in turn, adversely affect our financing strategy.

Cash Flows

The table below summarizes our cash flows from operating activities, investing activities and financing activities for the years ended December 31, 2016, 2015 and 2014.

in 000€	For the year ended December 31 2016	2015	2014
Net cash flow from operating activities	8,495	2,353	4,839
Net cash flow from/(used in) investing activities	(12,640)	(2,794)	(31,245)
Net cash flow from/(used in) financing activities	9,266	(1,788)	62,057
Net increase of cash and cash equivalents	**5,121**	**(2,229)**	**35,651**

Comparison of Year Ended December 31, 2016 and 2015

Net cash flow from operating activities was €8.5 million in the year ended December 31, 2016 compared to €2.4 million in the year ended December 31, 2015, an increase of €6.1 million, or 254.2%. The increase in cash flow from operating activities was primarily the result of a higher EBITDA (+ €5.6 million).

Net cash flow used in investing activities was €12.6 million in the year ended December 31, 2016 compared to €2.8 million in the year ended December 31, 2015, an increase of €9.8 million, or 350.0%. The increase in cash flow used in investing activities was primarily due to the repayment of our investments in held-to-maturity investments (€10.0 million).

Net cash flow used in financing activities was €9.3 million in the year ended December 31, 2016 compared to net cash flow from financing activities of €-1.8 million in the year ended December 31, 2015, a fluctuation of €11.1 million. The fluctuation in cash flow used in or from financing activities was primarily related to increased proceeds from loans and borrowings.

Comparison of Year Ended December 31, 2015 and 2014

Net cash flow from operating activities was €2.4 million in the year ended December 31, 2015 compared to €4.8 million in the year ended December 31, 2014, a decrease of €2.4 million, or 50.0%. The decrease in cash flow from operating activities was primarily the result of a lower EBITDA (-€2.0 million).

Net cash flow used in investing activities was €2.8 million in the year ended December 31, 2015 compared to €31.2 million in the year ended December 31, 2014, a decrease of €28.4 million, or 91.0%. The decrease in cash flow used in investing activities was primarily the lower level of acquisitions during 2015 compared to 2014. During 2015, we acquired Cenat BVBA (€1.6 million), compared to e-prototypy and OrthoView Holdings Limited in 2014 (€10.4 million). In addition, during 2015, our investments in held-to-maturity investments (€10.0 million) were repaid in full.

Net cash flow used in financing activities was €1.8 million in the year ended December 31, 2015 compared to net cash flow from financing activities of €62.1 million in the year ended December 31, 2014, a decrease of €63.9 million, or 102.9%. The decrease in cash flow used in financing activities was primarily related to the receipt of the net proceeds from our initial public offering in 2014 (€64.2 million) and our not conducting comparable capital increases in 2015.

Investments in Property, Plant and Equipment and Intangible Assets

The table below describes our investments in property, plant and equipment and intangible assets for the years ended December 31, 2016, 2015 and 2014:

	For the year ended December 31		
in 000€	2016	2015	2014
Purchase of property, plant and equipment	15,306	12,836	12,228
Purchase of intangible assets	2,342	1,521	923
Total	**17,648**	**14,357**	**13,151**

Indebtedness

As of December 31, 2016, we had loans and borrowings in the total amount of €33.8 million, with fixed interest rates varying from 0% to 5.40%. These loans include secured bank loans used to finance the construction of office and production facilities and loans and finance leases with Ailanthus NV, a related party.

The following table sets forth our principal indebtedness as of the dates indicated:

			As of December 31		
in 000€	Interest rate	Maturity	2016	2015	2014
€5,000 bank loan	4.61%	Jun-2027	3,847	4,125	4,390
€4,050 bank loan	1.24%	Dec-2032	4,050	—	—
€2,390 bank loan	1.36%	Oct-2020	1,847	2,392	—
€2,354 bank loan	1.15%	Sep-2032	2,354	—	—
€2,000 bank loan	4.43%	Nov-2020	658	808	952
€1,800 bank loan	0.92%	Sep-2023	1,738	—	—
€1,750 bank loan	5.40%	Dec-2022	906	1,019	1,138
€1,600 investment loan	1.55%	Nov-2022	1,382	1,600	—
€1,000 convertible bond	3.70%	Oct-2020	1,000	1,000	1,011
€1,000 straight loan	1.79%	Feb-2015	—	—	1,000
€899 investment loan	1.12%	Dec-2022	775	900	—
€750 bank loan	1.07%	Sep-2023	750	—	—
€630 institutional loan	0.25%	Sep-2021	630	—	—
€613 bank loan	0.77%	Jun-2023	570	—	—
€612 bank loan	0.85%	Dec-2023	612	—	—
€609 bank loan	1.96%	Mar-2019	—	405	529
€500 bank loan	1.78%	Dec-2018	205	305	404
€490 bank loan	1.02%	Mar-2023	439	—	—
€486 bank loan	0.78%	Jun-2023	452	—	—
€468 bank loan	0.76%	Sep-2023	452	—	—
€450 bank loan	0.93%	Dec-2023	450	—	—
€448 bank loan	5.11%	Dec-2019	200	271	345
€425 bank loan	0.78%	Jun-2023	395	—	—
€414 bank loan	0.76%	Sep-2023	399	—	—
€400 loan with related party	4.23%	Oct-2025	266	290	313
Interest free loan agreements	—	Oct-2016; Mar-2020	306	856	1,652
Obligations under finance lease with related party	0.00%	2015-2017	—	—	1,087
Obligations under finance leases (third parties)	—	2016-2023	7,339	5,823	3,127
Short term credit agreements	0.90%	Jun-2015	—	—	325
Short term credit agreements	1.08%	Jun-2016	—	25	—
Other loans	—	—	1,784	1,270	1,074
Total loans and borrowings			**33,806**	**21,089**	**17,347**
of which current			5,539	4,482	5,499
non-current			28,267	16,607	11,848

K€5,000 secured bank loan

This bank loan has been used to finance the construction of a portion of our office and production building in Leuven (Belgium). The loan term commenced on December 23, 2011 and was completely drawn at €5.0 million as of June 30, 2012. The loan matures on June 30, 2027. The loan bears a fixed interest rate of 4.61% with monthly fixed installments as from July 1, 2012. This bank loan is secured with a mortgage on the building.

K€4,050 secured bank loan

This bank loan has been used to finance the construction of a portion of our office and production building in Leuven (Belgium). The loan provides for drawings up to a total amount of €12.0 million and was first drawn on December 28, 2016 in an amount of €4.1 million. The loan matures on December 31, 2032. The loan bears a fixed interest rate of 1.24%. Repayment of principal will only start as of December 1, 2022. This bank loan is secured with a mortgage.

K€2,390 bank loan

This bank loan has been used to finance our Polish operations. The loan term commenced on October 22, 2015 and is repaid in 60 fixed monthly payments. The loan bears a fixed interest rate of 1.36%.

K€2,354 secured bank loan

This bank loan has been used to finance the construction of our office and production building in Poland. The loan provides for drawings up to a total amount of €6.0 million and was first drawn on December 28, 2016 in an amount of €2.4 million. The loan matures on September 30, 2032. The loan bears a fixed interest rate of 1.15%. The repayment of principal will only start as of June 1, 2019. This bank loan is secured with a mortgage.

K€2,000 secured bank loan

This bank loan has been used to finance the construction of a portion of our office and production building in Leuven. The loan term commenced on December 1, 2005 with a maturity of 15 years. The loan bears a fixed interest rate of 4.43% with monthly fixed installments. This bank loan is secured with a mortgage on the building.

K€1,800 bank loan

This bank loan has been used to finance the purchase of production equipment. The loan term commenced on October 28, 2016 with a maturity of seven years. The loan bears a fixed interest rate of 0.92% with monthly fixed installments.

K€1,750 secured bank loan

This bank loan has been used to finance the construction of an office in the Czech Republic. The loan term commenced on November 1, 2008 with a maturity of 14 years. The loan bears a fixed interest rate of 5.40% with monthly fixed installments. This bank loan is secured with a mortgage on the building.

K€1,600 investment loan

This loan has been used to finance the operations of Materialise USA and has a term of seven years. The loan bears a fixed interest rate of 1.55% and payments are due each quarter.

K€1,000 convertible bond loan

We issued on October 28, 2013 1,000 convertible bonds to a related party for a total amount of €1.0 million. The bonds have been fully subscribed by a member of our senior management and his spouse. The bonds have a maturity of seven years, bear an annual interest rate of 3.7% and are convertible, into ordinary shares at a conversion price of €1.97 per share. Upon initial recognition, an amount of €0.1 million was recognized in consolidated reserves, reflecting the fair value of the conversion option. For additional information, see “Description of Share Capital—Share Capital.”

K€1,000 straight loan

Rapidfit N.V. previously obtained a straight loan in order to finance its working capital needs. The loan was repaid by the end of 2016.

K€900 investment loan

This loan has been used to finance our Polish operations and has a term of seven years. The loan bears interest at a fixed rate of 1.12% with monthly installments.

K€750 bank loan

This loan has been used to finance our operations and has a term of seven years. The loan bears interest at a fixed rate of 1.07% with monthly installments.

K€630 institutional loan

This loan has been used to finance our German production operations. The loan provides for drawings up to a total amount of €2.0 million, and as of December 31, 2016, €0.6 million had been drawn. The loan is repayable over a four-year period, beginning in September 2017. The loan bears interest at a fixed rate of 0.25% with quarterly installments.

K€613 bank loan

This loan was contracted to finance the purchase of a 3D printer and has a term of seven years. The loan bears interest at a fixed rate of 0.77% with monthly installments.

K€612 bank loan

This loan was contracted to finance the purchase of a 3D printer and has a term of seven years. The loan bears interest at a fixed rate of 0.85% with monthly installments.

K€609 bank loan

This bank loan was contracted in order to finance the acquisition of machines.

K€500 secured bank loan

This bank loan has been used to finance the purchase of a 3D printing machine. The loan term commenced on December 1, 2013 with a maturity of five years. The loan bears interest at a fixed rate of 1.78% with monthly fixed installments. This loan is secured.

K€414–K€490 bank loans

Several bank loans, with maturities of five to seven years and with various installment periods, have been used to finance the purchase of 3D printers and other equipment. The loans bear interest at annual rates of 0.76% to 5.11%.

Interest-free loans

We have several interest-free loans with an outstanding nominal amount of K€308 (2015: K€881; 2014: K€1,595). The interest-free loans have been initially measured at fair value, which is the present value of the future installments with a discounting rate of 3.04%. The maturity of the remaining loans is February and March 2020 and have either monthly or quarterly installments. The carrying value at 31 December 2016 is €0.3 million (2015: €0.9 million; 2014: €1.7 million). The difference between the carrying value and the nominal value is recognized as financial income over the loan period. The loans have been granted by either government organizations or business partners.

Loans with related party

We have entered into a loan agreement, with a fixed interest rate of 4.23%, with Ailanthus NV, which is a related party and shareholder, for the financing of an office building in France. For additional information, see “Certain Relationships and Related Party Transactions.”

For additional information regarding our loans and borrowings, see Note 13 to our audited consolidated financial statements.

Material Unused Sources of Liquidity

Our cash and cash equivalents as of December 31, 2016, 2015 and 2014 were €55.9 million, €50.7 million and €51.0 million, respectively. Our unused lines of credit as of December 31, 2016, 2015 and 2014 were €3.1 million, €4.4 million and €4.3 million, respectively, and primarily consisted of straight loans.

Transfers from Subsidiaries

The amount of dividends payable by our subsidiaries to us is subject to, among other restrictions, general limitations imposed by the corporate laws, capital transfer restrictions and exchange control restrictions of the respective jurisdictions where those subsidiaries are organized and operate. For example, China has very specific approval regulations for all capital transfers to or from the country and certain capital transfers to and from Ukraine are subject to obtaining a specific permit. Dividends paid to us by certain of our subsidiaries may also be subject to withholding taxes in certain jurisdictions. Of our cash and cash equivalents held outside of Belgium as of December 31, 2016, 2015 and 2014, the amount of cash that would have been subject to withholding taxes if transferred to us by way of dividends and the amount of cash that could not have been transferred by law, or the transfer of which would have been subject to prior approval that was beyond our control, was in each case immaterial.

C. Research and Development, Patents and Licenses

For the years ended December 31, 2016, 2015 and 2014, our research and development expenses were €17.7 million, €18.2 million and €15.1 million, respectively, and were 15.4%, 17.8% and 18.6% of our revenue, respectively. For more information regarding our research and development program, see "Item 4. Information on the Company—B. Business Overview—Research and Development."

D. Trend Information

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events that are reasonably likely to have a material effect on our revenues, profitability, liquidity or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future operating results or financial conditions.

E. Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that have, or are reasonably likely to have, a material current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

F. Tabular Disclosure of Contractual Obligations

The table below sets forth our contractual obligations as of December 31, 2016:

in 000€	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Loans and borrowings	26,411	3,223	6,374	5,748	11,066
Financial lease commitments	7,395	2,287	3,503	1,057	548
Scheduled interest payments(1)	3,122	540	910	666	1,006
Operating lease commitments	4,621	2,012	1,964	561	84
Purchase obligations	1,290	439	851	0	0
Total	**42,839**	**8,501**	**13,602**	**8,032**	**12,704**

(1) Scheduled interest payments comprises the interest payable on loans and borrowings and financial lease commitments. No interest is payable on the other contractual obligations in the above table.

In relation to our property, plant and equipment, we had committed expenditures of €10.2 million as of December 31, 2016. These commitments relate to the construction of the new buildings in Belgium and Poland and are not included in the above table.

Effective as of January 1, 2017, we have refinanced certain operating lease commitments related to vehicles into financial lease commitments in an amount of €1.7 million. These commitments are also not included in the above table.

G. Safe Harbor

See “Special Note Regarding Forward-Looking Information” on page 1 of this annual report.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

The following table sets forth certain information with respect to the current members of our board of directors and senior management:

Name	Age	Position
Directors:		
Wilfried Vancraen	55	Founder, Director & Chief Executive Officer
Peter Leys	52	Executive Chairman
A Tre C CVOA, represented by Johan De Lille	54	Director
Hilde Ingelaere	55	Director & Executive Vice President
Pol Ingelaere	81	Director
Jürgen Ingels	46	Director
Jozef Vander Sloten	54	Director
Godelieve Verplancke	57	Director
Senior Management and Executive Committee Members:		
Wilfried Vancraen	55	Founder, Director & Chief Executive Officer
Peter Leys	52	Executive Chairman
Hilde Ingelaere	54	Director & Executive Vice President
Seaquence BVBA, represented by Johan Pauwels	49	Executive Vice President
Wim Michiels	48	Executive Vice President
Bart Van der Schueren	50	Executive Vice President, Chief Technology Officer
Alfinco BVBA, represented by Johan Albrecht	53	Executive Vice President, Chief Financial Officer
Ioberan BVBA, represented by Stefaan Motte	42	Vice President, Software Segment
De Vet Management bvba, represented by Brigitte de Vet-Veithen	46	Vice President, Medical Segment
Level 5 BVBA, represented by Jurgen Laudus	38	Vice President, Manufacturing Segment
Welkeraad BVBA, represented by Sabine Demey	48	Vice President, Software Development
Foqus BVBA, represented by Nicolas Foqué	42	Vice President, Human Resources
Carla Van Steenbergen	42	Chief Legal Officer

* *Executive Committee: As of January 1, 2017, an Executive Committee has been established, consisting of our senior management and Messrs. Motte, Laudus and Foqué and Mrs. de Vet, Demey and Van Steenbergen.*

Each of our current directors was appointed at the 2016 annual general meeting of shareholders. One of our previous directors, Marcel Demeulenaere, resigned effective at the 2016 annual general meeting of shareholders. The term of the directorship of each member of our board of directors will expire at the 2017 annual general meeting of shareholders. The business address of the members of our board of directors is the same as our business address: Technologielaan 15, 3001 Leuven, Belgium. Our board of directors has determined that three members of our board of directors, Jürgen Ingels, Godelieve Verplancke and A Tre C CVOA, represented by Johan De Lille are independent under Belgian law and the NASDAQ Stock Market listing requirements.

The following is a brief summary of the business experience of the current members of our board of directors:

Wilfried Vancraen. Wilfried Vancraen has served as one of our directors and as our Chief Executive Officer since founding our company in July 1990. Mr. Vancraen previously worked as a research engineer and consultant at the Research Institute of the Belgian Metalworking Industry, where he was introduced to 3D printing. Passionate about this new technology and firm in his belief that it could help create a better and healthier world, he founded Materialise in July 1990. Mr. Vancraen holds several patents related to the technical and medical applications of 3D printing and remains committed to using the technology to make positive changes in people's lives. In recent years, Mr. Vancraen has been awarded the RTAM/SME Industry Achievement Award, the highest honor in the 3D printing industry, has been selected as the most influential person in additive manufacturing by industry professionals and TCT Magazine, and has been listed one of the five leading players in his sector by the Financial Times. He is also the recipient of a 2013 Visionaries! award from the Museum of Art and Design in New York. Mr. Vancraen holds a Master of Science in Electro-Mechanical Engineering and a Masters in Business Administration from KU Leuven.

Peter Leys. Peter Leys has served as one of our directors and as our Executive Chairman since 2013. Previously, from 1990 to 2013, Mr. Leys was at the Brussels office of Baker & McKenzie CVBA, where he focused on mergers and acquisitions, and capital markets. Mr. Leys lectures a mergers and acquisitions contract design course at the KU Leuven. Mr. Leys holds a Candidacy Degree in Philosophy from KU Leuven and Master of Law degrees from KU Leuven and the University of Georgia.

Johan De Lille. Johan De Lille has represented A Tre C CVOA as one of our directors since July 2006, and A Tre C CVOA has been an independent director of Materialise since 2006. Mr. De Lille started his professional career as an auditor at Arthur Andersen LLP in 1988. In 1994, he became Vice President & Group Controller of Ackermans & van Haaren NV, a Belgian public holding company. In 1999, he became Chief Financial Officer of Easdaq/Nasdaq Europe and took on the role of Chief Financial Officer of Option NV, a Belgian public technology company, in 2001. Mr. De Lille joined Delhaize Group, a Belgian public company, as Vice President & Controller in September 2002, and later became Chief Internal Auditor of the Delhaize Group in August 2006, and Chief Financial Officer of Delhaize Belgium in January 2009. Since 2013, Mr. De Lille has acted as Chief Financial & Information Officer of BMT Group, an industrial family owned holding company active in high-precision machining. Mr. De Lille serves as an independent director on the board of directors of Boma NV, a Belgian private company specializing in cleaning products. In 1988, Mr. De Lille was the award winner for the best final paper of the Department of Economics from KU Leuven. In 2010, he received the CFO Magazine Award for the Best Finance Team of the year for Working Capital in Belgium. Mr. De Lille holds a Masters degree in Economics, with a major in Econometrics and Mathematical Economics, from KU Leuven.

Hilde Ingelaere. Hilde Ingelaere has served as one of our directors since December 1997 (first as representative of Ailanthus NV and in her individual capacity since June 2015) and has been our Executive Vice President since January 2011. Since joining our company in 1990, Ms. Ingelaere has managed several staff departments, including the human resources, finance and legal departments. Ms. Ingelaere currently serves as Executive Vice President of our Materialise Medical segment. Prior to joining our company, from 1989 to 1992, Ms. Ingelaere was a business analyst with Plant Genetic Systems. From 1986 to 1989, Ms. Ingelaere was at Bristol Myers Squib where she focused on cardiovascular clinical research. Ms. Ingelaere holds a Masters in Bioengineering from KU Leuven, where she focused on Biotechnology, and a Masters in Business Administration from KU Leuven.

Pol Ingelaere. Pol Ingelaere has served as one of our directors since 2011. Mr. Ingelaere has been involved for many years in education and the sciences, teaching physics, chemistry and biology to final grade college students in Belgium. In 1981 Mr. Ingelaere was appointed as an inspector for all science teachers in West Flanders, Belgium. Mr. Ingelaere has been an active member of a number of educational commissions. Mr. Ingelaere holds a Masters degree in Biology from the University of Ghent and an International Certificate in Human Ecology from the Free University of Brussels.

Jürgen Ingels. Jürgen Ingels has served as one of our independent directors since November 2013. Mr. Ingels is Founder and Managing Partner of SmartFin Capital, a growth stage private equity fund that was set up in December 2014. In October 2014, Mr. Ingels sold Clear2Pay NV/S.A., a global innovative payments software technology company he founded in 2000, to FIS Global. The clients of Clear2Pay include global and major regional financial institutions such as ING Group, Banco Santander, S.A., Crédit Agricole S.A., BNP Paribas, The U.S. Federal Reserve, Royal Bank of Scotland, The People's Bank of China (PBOC). In 2012 Mr. Ingels co-founded NGdata, Inc., a global big data technology company. Mr. Ingels started his career in private equity in 1997 at Dexia NV/S.A., where his role was focused on investing in technology companies. Mr. Ingels currently serves as a director on the board of directors for UnifiedPost NV, Guardsquare NV, Projective NV, Itineris NV, Newtec NV, Itiviti AB, Willemen Groep and Maria DB. In 2016 Mr. Ingels founded B-hive, a European fintech hub based in Brussels. Mr. Ingels holds a Masters degree in Business Administration and a Masters degree in Political and Social Sciences from the University of Antwerp.

Jozef Vander Sloten. Jozef Vander Sloten has served as one of our directors since January 2007. Mr. Vander Sloten is a full professor at the Faculty of Engineering Science, KU Leuven and chaired the Division of Biomechanics for two terms from 2006 to 2014. He chaired the Leuven Medical Technology Centre (L-MTC), which he founded in 2008 until the end of his two terms in 2016. Mr. Vander Sloten teaches engineering mechanics, problem solving and engineering design, computer integrated surgery systems, and medical device design including regulatory affairs. From 2006 to 2012, he served as program director of the Master in Biomedical Engineering at KU Leuven. His research interests are computer applications in musculoskeletal biomechanics and computer integrated surgery, on which he authored more than 160 journal papers. Mr. Vander Sloten is a Founding Fellow of the European Alliance for Medical and Biological Engineering and Science, where he previously served as president in 2006, president-elect in 2005 and secretary-general from 2003 to 2004. In 2015, he was elected as a member of the International Academy for Medical and Biological Engineering. Mr. Vander Sloten holds a Masters degree in Mechanical Engineering and a PhD in Mechanical Engineering – Biomedical Engineering from KU Leuven. Since 2016 he is Vice-Dean for International Affairs at the Faculty of Engineering Science, KU Leuven.

Godelieve Verplancke. Godelieve Verplancke has served as one of our independent directors since June 2015. Ms. Verplancke began her career in 1984 with The Beecham Group (now part of GlaxoSmithKline), and has since held key management positions with Merck & Co., as well as Bristol-Myers Squibb, where she served as Managing Director, leading their

Belgian/GDL subsidiary, until 2012. Ms. Verplancke has also served as a board member for Brussels-based Europe Hospitals, the Imelda Hospital in Bonheiden, the Euronext fund, Quest for Growth and the Stichting tegen Kanker. She is also the founder and managing director of Qaly@Beersel, an elderly care center in Belgium. In addition to being a medical doctor (MD – KU Leuven), Ms. Verplancke holds a postgraduate degree in Economics and a Master in Business Administration from the University of Antwerp. She has also completed courses at INSEAD, CEDEP, Columbia University and the Vlerick Business School, and is a certified Executive Coach (PCC).

Our Board of Directors has established an Executive Committee, within the meaning of article 524bis of the Belgian Companies Code. The following is a brief summary of the professional experience of the members of our Executive Committee, which was established effective as of January 1, 2017:

Johan Pauwels. Johan Pauwels has served as an Executive Vice President of our company since January 2011 and has been with our company since our founding. In 1990, Mr. Pauwels completed his Master's thesis on stereolithography on the very first 3D printing machine at Materialise. After graduating in 1991, Mr. Pauwels stayed on with our company, focusing on software development to support our 3D printing services. Throughout his career with our company, Mr. Pauwels has held several positions, including Software Sales Manager and Director of Sales, and is currently an Executive Vice President responsible for global sales organization and our sales offices around the world. Mr. Pauwels holds a Masters' degree in Electro-Mechanical Engineering from KU Leuven.

Wim Michiels. Wim Michiels has served as an Executive Vice President of our company since January 2011 and has been with our company since 1999, first as international sales manager for the prototyping service bureau, then as General Manager Asia Pacific, operating out of the Materialise Malaysia branch office. In 2006, Mr. Michiels returned to our headquarters to start a new assignment as Division Manager for our software division. In 2011, he became Executive Vice President to the company, focusing mainly on business development. Finally, Mr. Michiels came back to Malaysia in September 2012 to become the head of Materialise Malaysia Sdn. Bhd. and to further support the Asian market as corporate vice president. Mr. Michiels holds a Masters' degree in Mechanical Engineering from KU Leuven.

Bart Van der Schueren. Bart Van der Schueren has served as an Executive Vice President of our company since January 2011 and as our Chief Technology Officer since 2016. Prior to joining Materialise, Mr. Van der Schueren was at KU Leuven as a liaison engineer for the newly founded Materialise and established the basic research activities for the company while also founding the research activities in 3D printing at the KU Leuven. Mr. Van der Schueren then went on to obtain a PhD in selective laser metal sintering. In 1995, Mr. Van der Schueren officially joined Materialise and ran the service bureau. Over the years, his dedication and expertise has grown the service bureau from a regional player to one of the most prominent additive manufacturing facilities in Europe. In 2011, Mr. Van der Schueren became an Executive Vice President of our company, responsible for the Materialise Manufacturing segment and focusing on production and engineering services. Mr. Van der Schueren holds a PhD in Selective Laser Metal Sintering and a Masters' degree in Mechanical Engineering from KU Leuven.

Johan Albrecht. Johan Albrecht has represented Alfinco BVBA as our Chief Financial Officer since August 2015. Mr. Albrecht joined Materialise from BARC NV, a global central laboratory that supports the pharmaceutical and biotech industry in the development of new drugs, where he served as Chief Financial Officer between 1989 and 2015, with responsibility for its worldwide financial and business reporting and control systems. Mr. Albrecht was also a member of BARC NV's executive committee and a director in its subsidiaries in Belgium, the United States, China, Australia, Singapore and South Africa. After Cerba European Lab, a network of 200 laboratories, acquired BARC NV in 2007, Mr. Albrecht also joined Cerba European Lab's executive committee in 2011. Prior to joining BARC NV, Mr. Albrecht served in various financial capacities with Pizzaland Benelux (United Biscuits), Applied Data Research and Minit International. Mr. Albrecht holds a postgraduate degree in corporate finance from KU Leuven and a Bachelor of Science in Business Administration from HU Brussels University.

Stefaan Motte. Stefaan Motte serves as Vice President and General Manager of the Materialise Software segment, and as such is responsible for the general strategic management of that segment. Mr. Motte joined us in April 2010, with an initial focus on growing our cranio-maxillofacial business. From 2012 onwards, Mr. Motte's scope broadened to orthopaedic applications as he took up the role of Director of the Clinical Business Unit. From 2015 onwards, Mr. Motte assumed his current role leading the Software business. Mr. Motte has been a member of the Materialise Executive Committee since 2010. Prior to joining Materialise, Mr. Motte was a software architect and project manager with Koninklijke Philips NV from 2001 to 2006. From 2006 to 2010, Mr. Motte worked with NXP semiconductors as a competence center manager, and a member of the NXP Belgium management team. Mr. Motte holds a Master of Science degree in Mathematics from KU Leuven and a Master of Science degree in Applied Informatics from KU Leuven. In 2017 Mr. Motte was appointed Fellow of the Faculty of Science, KU Leuven.

Brigitte de Vet-Veithen. Brigitte de Vet-Veithen has represented De Vet Management bvba as Vice President Medical since June 2016. Mrs de Vet-Veithen has almost 20 years of experience in the Healthcare and Life Sciences Sector. She has worked in various management roles for Johnson & Johnson, ultimately serving as Vice President for the EMEA region of Cordis Neurovascular and General Manager of Cordis in Germany. Before joining Materialise she has held various leadership roles as representative of De Vet Management bvba including the role of Chief Executive Officer of Acertys group, a provider of medical devices, software, services and supplies to hospitals and medical professionals. Mrs de Vet-Veithen holds a Master of Business Administration with a Major in Engineering from HEC Liege and an MBA from INSEAD.

Jurgen Laudus. Jurgen Laudus serves as Vice-President of our Manufacturing unit. Mr. Laudus joined us in August 2001 as project manager and continued to our UK office to become Rapid Tooling manager in 2003. For two years, Mr Jurgen was responsible for both our Rapid Tooling sales support and production management. In 2005, Mr Jurgen returned to Belgium to become international production manager for our additive manufacturing services and later on sales manager, playing an active role in the growth of the AM production activities of Materialise. Mr. Laudus holds a Master of Science degree in Engineering from the KU Leuven.

Sabine Demey. Sabine Demey represents Welkeraad bvba as CIO and Vice President Software Research & Development for Materialise since January, 1st 2017. Sabine Demey is also Director of Materialise Ukraine LLC. Sabine Demey has served as Director of our Software Research & Development & Information Technology groups since 2011. Ms. Demey joined Materialise in 1997 and started research in the applications of 3D printing in the dental industry which resulted in the development of our first medical guides and patents. Ms. Demey has served in several positions related to software development and medical applications of 3D printing, including the development and launch of our CMF business line. Ms. Demey holds a Masters in Engineering Sciences, Computer Science, Mechatronrics from KU Leuven (1991) and a PhD in Engineering Sciences from KU Leuven (1996).

Nicolas Foqué. Nicolas Foqué has served as our Vice President of Human Resources since May 2013. Mr. Foqué joined Materialise in 2007 after working over seven years for Electrabel, one of the largest Belgian utilities companies. Mr. Foqué headed the Software for Additive Manufacturing business group for several years, and served as Chief Financial Officer of RapidFit NV from April 2012 to April 2013, prior to becoming our Manager of Human Resources in 2013. Mr. Foqué holds a Master of Science in Mining Engineering from KU Leuven.

Carla Van Steenbergen. Carla Van Steenbergen graduated from the law faculty of KU Leuven in 1999. After having worked for three years at the Brussels based law firm, Marx Van Ranst Vermeersch & Partners, she temporarily moved to London to earn a LLM degree at King's College London. Upon her return to Belgium, she started working as in-house legal counsel for our company, a position which she holds to this day. Over the years, our legal department has expanded, changing Ms. Van Steenbergen's role from the sole company lawyer to that of a legal team manager. She is our Compliance Officer and a member of our Executive Committee in addition to being secretary to the Board of Directors.

Family Relationships

Wilfried Vancraen and Hilde Ingelaere are spouses. Pol Ingelaere is the father of Hilde Ingelaere. No other family relationship exists between any members of our board of directors or senior management.

B. Compensation

Compensation of Directors

Our Remuneration and Nomination Committee recommends the level of remuneration for directors. These recommendations are subject to approval by our board of directors and, subsequently, by our shareholders at the annual general meeting. During the year ended December 31, 2016, only the directorships of Mr. Vancraen, Mr. Leys, Ms. Ingelaere, Mr. De Lille, Mr. Vander Sloten, Mr. Ingels, Mr. Weyns and of Ms. Verplancke were remunerated. See "—Compensation of Senior Management" for more information about the remuneration of the directorships of Mr. Vancraen, Mr. Leys and Ms. Ingelaere. During the year ended December 31, 2016, Mr. De Lille, Mr. Vander Sloten, Mr. Ingels, Mr. Weyns and Ms. Verplancke each received annual remuneration equal to €10,000. In addition, Mr. De Lille, Mr. Vander Sloten, Mr. Ingels, Mr. Weyns and Ms. Verplancke each received a remuneration of €1,250 per physical board meeting that he or she attends and €625 for each board meeting that is held via conference call (lasting more than one hour) and that he or she attends.

In addition, the Chairman of the Audit Committee and the Chairman of the Remuneration and Nomination Committee received annual remuneration of €7,500 and €2,500 respectively. Each independent member (including the Chairman) of the Audit Committee or the Remuneration and Nomination Committee received a remuneration of €1,250 for each physical committee meeting that he or she attends, and €625 for each committee meeting that is held via conference call (lasting more than one hour) and that he or she attends. The Remuneration and Nomination Committee benchmarks directors' compensation against peer companies to ensure that it is competitive. In addition, our board of directors sets and revises, from time to time, the rules and level of compensation for directors carrying out a special mandate or sitting on one or more of the board of directors committees and the rules for reimbursement of directors' business-related out-of-pocket expenses.

Compensation of Senior Management

In 2016, our senior management received in the aggregate total gross compensation of €1.2 million which included base salary, bonus payments, company car allowance and other benefits. This amount also includes the remuneration of the directorships of Mr. Vancraen, Mr. Leys and Ms. Ingelaere.

Compensation of Executive Committee

We have entered into employment or consultancy agreements with each member of our Executive Committee. As of January 1, 2017, all employment agreements that were previously in place with the members of our Executive Committee have been terminated and have been replaced with services agreements (Contracts for Paid Office as a member of the Executive Committee). The terms of these agreements are substantially similar. These agreements generally provide for an annual base salary. In addition to the fixed remuneration components, under the terms of these agreements, members of our Executive Committee are entitled to certain additional benefits (including mobile phone and director and officer liability insurance) and reimbursement of necessary and reasonable expenses. These consultancy agreements with members of our Executive Committee provide for payments and benefits (including upon termination of employment) that we believe are in line with customary market practice for similar companies who are operating in our industry.

C. Board Practices

Service Contracts

Except as described above under "—B. Compensation of Executive Committee," we do not have service contracts with any member of our Board of Directors or Executive Committee.

Board of Directors Practices

Decisions are generally made by our board of directors as a whole. However, decisions on certain matters may be delegated to committees of our board of directors or to the Executive Committee to the extent permitted by law and our articles of association. The chairperson, or if he or she is prevented from doing so, the vice chairperson, chairs the meetings of our board of directors and determines the order in which the agenda items are discussed, the method and order of the voting, any adjournment of the discussion and passing of resolutions on individual agenda items after a due assessment of the circumstances.

Our board of directors transferred management powers to the Executive Committee, except for the general policy of the company and other powers which are reserved by Belgian company law to the board of directors. The Executive Committee is supervised by our board of directors. The following actions are comprised under general policy of our company and are thus excluded from the powers of the Executive Committee:

- mergers and acquisitions;
- transfer and waive of intellectual property rights to third parties;
- granting of exclusivity rights to third parties with an important impact on the freedom of a particular business segment;
- nomination and removal of members of the Executive Committee;
- opening of offices abroad and nomination and removal of managers thereof;
- conclusion of financial loans;
- sale and purchase of real estate; and
- cancellation of a particular product line.

Our board of directors entrusted the daily management of the company to Wilfried Vancraen, our Chief Executive Officer, in conformity with article 525 of the Belgian Companies Code.

Pursuant to our articles of association, our board of directors may form committees from among its members and charge them with the performance of specific tasks. The committees' tasks, authorizations and processes are determined by our board of directors. Where permissible by law and our articles of association, important powers of our board of directors may also be transferred to committees.

Audit Committee

The Audit Committee consists of three members: Johan De Lille (Chairman), Godelieve Verplancke and Jürgen Ingels. Our board of directors has determined that Messrs. De Lille and Ingels and Ms. Verplancke are independent under Rule 10A-3 of the Exchange Act and the applicable rules of the NASDAQ Stock Market and that each of Messrs. De Lille and Ingels and Ms. Verplancke qualifies as an "audit committee financial expert" as defined under the Exchange Act.

Our Audit Committee assists our board of directors in overseeing the accuracy and integrity of our accounting and financial reporting processes and audits of our consolidated financial statements, the implementation and effectiveness of an internal control system and our compliance with legal and regulatory requirements, the independent auditors' qualifications and independence and the performance of the independent auditors.

The Audit Committee's duties and responsibilities to carry out its purposes include, among others:

- the review of our accounting processes;
- the review of the effectiveness of our internal systems of control, risk management and compliance;

- the consideration and recommendation of the nomination, compensation, retention and termination of the Company's statutory auditor for Belgian company law purposes and the Company's independent auditor for SEC purposes, the commissioning of the auditors to conduct audits, agreeing on additional services to be provided by the auditors under their respective engagements, the establishment of the scope and the main review points of the audit and oversight of the auditors' work (including resolution of disagreements with the auditors);
- the preparation of our board of directors' resolution on our consolidated financial statements;
- reviewing our interim consolidated financial statements that are made public or otherwise filed with any securities regulatory authority;
- discussing any flaws relating to our internal control systems, as reported by our board of directors to the audit committee;
- monitoring our bookkeeping and records; and
- the establishment of procedures for (i) the receipt, retention and treatment of complaints we receive regarding accounting, internal accounting controls or auditing matters and (ii) the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters.

Our Audit Committee is entitled to review information on any point it wishes to verify, and is authorized to acquire such information from any of our employees. It is also authorized to obtain independent advice, including legal advice, if this is necessary for an inquiry into any matter under its responsibility. It is entitled to call on the resources that will be needed for this task. It is entitled to receive reports directly from the auditors, including reports with recommendations on how to improve our control processes.

Remuneration and Nomination Committee

Our Remuneration and Nomination Committee consists of three members: Wilfried Vancraen, Jozef Vander Sloten and Johan De Lille. Our board of directors has determined that Mr. De Lille is independent under the applicable rules of the NASDAQ Stock Market.

Our Remuneration and Nomination Committee assists our board of directors in its decisions relating to the remuneration policy and individual remuneration packages for our board of directors and Chief Executive Officer, the appointment of directors, the Chief Executive Officer and the other members of senior management.

The Remuneration and Nomination Committee's duties and responsibilities to carry out its purposes include, among others:

- identifying individuals qualified to become members of our board of directors, consistent with criteria approved by our board of directors;
- recommending to our board of directors the director nominees for each annual general meeting, taking into account any nomination rights that certain shareholders may have under our articles of association;
- recommending to our board of directors director nominees to fill vacancies;
- recommending to our board of directors qualified and experienced directors for service on the committees of the board of directors;
- recommending to our board of directors the compensation of the members of senior management;
- recommending to our board of directors any incentive compensation plans and equity-based plans, and awards thereunder, and profit-sharing plans for our employees;
- evaluating the performance of our Chief Executive Officer; and
- advising our board of directors on other compensation issues.

D. Employees

The table below sets out information about the number of FTEs and fully dedicated consultants, which consultants included individual professionals who are registered as private entrepreneurs in Ukraine and who work exclusively with our company.

	As of December 31		
	2016	2015	2014
Total	1,432	1,304	1,244
Core competencies:*			
3D printing	281	207	180
Software development	325	309	315
Engineering	189	165	158
Segments:			
Materialise Software	251	118	100
Materialise Medical	523	257	233
Materialise Manufacturing	426	112	131
Additional staff	232	136	127

* *As of 2016, people reported as being part of the three core competencies are included also in the segment reporting and allocated to one of the four segments. The total of 1,432 is the sum of the four lines under "segments."*

We currently do not have a work council or trade union delegation. We have a health and safety committee entitled to certain information and consultation rights under Belgian law, at our Belgian headquarters. We consider our employee relations to be good and have never experienced a work stoppage.

E. Share Ownership

The following table sets forth information relating to beneficial ownership of our ordinary shares, as of December 31, 2016, for each member of our board of directors and senior management as of December 31, 2016:

	Ordinary Shares Beneficially Owned as of December 31, 2016	
Name of beneficial owner(1)	Number(2)	Percent(2)
Wilfried Vancraen(3)	33,095,964	69.9
Peter Leys(4)	508,904	1.1
A Tre C CVOA, represented by Johan De Lille(5)	—	—
Pol Ingelaere	15,861	*
Jürgen Ingels(6)	83,000	—
Jozef Vander Sloten	12,000	*
Godelieve Verplancke	—	—
Hilde Ingelaere(3)	33,095,964	69.9
Johan Pauwels(7)	188,188	*
Wim Michiels(8)	52,000	*
Bart Van der Schueren(9)	226,052	*
Johan Albrecht(10)	1,284	—

* Less than 1%

(1) Except as otherwise indicated, the address for each of the persons named above is Technologielaan 15, 3001 Leuven, Belgium.

(2) Beneficial ownership is determined in accordance with the rules and regulations of the SEC. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we have included shares that the person has the right to acquire within 60 days of December 31, 2016, including through the exercise of any option, warrant or other right or the conversion of any other security. These shares, however, are not included in the computation of the percentage ownership of any other person. Except as otherwise indicated, we believe the persons named in this table have sole voting and investment power with respect to all ordinary shares shown as beneficially owned by them, subject to community property laws where applicable and to the information contained in the footnotes to this table.

(3) Consists of (i) 5,329,664 ordinary shares held by Mr. Vancraen, (ii) 276,000 ordinary shares held by Ms. Ingelaere, (iii) 40,000 ADSs held by Mr. Vancraen, (iv) 14,021,612 ordinary shares jointly held by Mr. Vancraen and Ms. Ingelaere through Idem, a civil partnership (*burgerlijke maatschap / société civile de droit commun*) that is controlled and managed by Mr. Vancraen and Ms. Ingelaere, and (v) 13,428,688 ordinary shares held by Ailanthus NV, which is owned and controlled by Mr. Vancraen and Ms. Ingelaere. Mr. Vancraen and Ms. Ingelaere may be deemed to share voting power and investment power over these shares. Does not include (i) 1,500 warrants issued and granted to Mr. Vancraen or 1,500 warrants issued and granted to Ms. Ingelaere under the 2013 Warrant Plan, which warrants are exercisable for 6,000 ordinary shares and 6,000 ordinary shares, respectively, at €2.14 per share, vest 25% on a yearly basis beginning in October 2018 and expire in 2023, (ii) 18,180 warrants issued and granted to Mr. Vancraen or 18,180 warrants issued and granted to Ms. Ingelaere under the 2014 Warrant Plan, which warrants are exercisable for 18,180 ordinary shares and 18,180 ordinary shares, respectively, at €8.81 per share, vest 25% on a yearly basis beginning in October 2018 and expire in 2024 or (iii) 15,000 warrants issued and granted to Mr. Vancraen or 15,000 warrants issued and granted to Ms. Ingelaere under the 2015 Warrant Plan, which warrants are exercisable for 15,000 ordinary shares and 15,000 ordinary shares, respectively, at €6.45 per share, vest 10% on September 2018, 20% on September 2019, 30% on September 2020 and 40% on September 2021, and expire in 2025.

(4) Consists of 508,904 ordinary shares issuable upon conversion of 1,000 convertible bonds which have been issued to and subscribed by Mr. Leys and Ms. Kindt and which can be converted at a conversion price of €1.97 per share and expire in 2020. Does not include (i) 72,774 warrants issued and granted to Mr. Leys under the 2013 Warrant Plan, which warrants are exercisable for 291,096 ordinary shares at €1.97 per share, vest 25% on a yearly basis beginning in October 2017 and expire in 2023 or (ii) 15,000 warrants issued and granted to Mr. Leys under the 2015 Warrant Plan, which warrants are exercisable for 15,000 ordinary shares at €6.45 share, vest 10% on September 2018, 20% on September 2019, 30% on September 2020 and 40% on September 2021, and expire in 2025.

(5) The address for A Tre C CVOA is Timmermansstraat 32, 8340 Damme, Belgium.

(6) Consists of (i) 50,000 ordinary shares held by Jinvest BVBA, which is owned and controlled by Mr. Ingels, (ii) 33,000 ADSs held by Jinvest BVBA. The address for Jinvest BVBA is Clemenceauxstraat 177A, 2860 Sint-Katelijne-Waver, Belgium.

(7) Consists of ordinary shares held jointly with Mr. Pauwels' spouse Kristine Van Muylder. Mr. Pauwels and Ms. Van Muylder may be deemed to share voting power and investment power over these shares. Does not include (i) 1,500 warrants issued and granted to Mr. Pauwels under the 2013 Warrant Plan, which warrants are exercisable for 6,000 ordinary shares at €2.14 per share, vest 25% on a yearly basis beginning in October 2018 and expire in 2023, (ii) 18,180 warrants issued and granted to Mr. Pauwels under the 2014 Warrant Plan, which warrants are exercisable for 18,180 ordinary shares at €8.81 per share, vest 25% on a yearly basis beginning in October 2018 and expire in 2024 or (iii) 15,000 warrants issued and granted to Mr. Pauwels under the 2015 Warrant Plan, which warrants are exercisable for 15,000 ordinary shares at €6.45 per share, vest 10% on September 2018, 20% on September 2019, 30% on September 2020 and 40% on September 2021, and expire in 2025.

(8) Consists of (i) 32,000 ordinary shares held by Mr. Michiels, (ii) 20,000 ADSs held by Mr. Michiels, and (iii) 600 ADSs held by Mr. Michiels' spouse Ellen Dhoore. Mr. Michiels and Ms. Dhoore may be deemed to share voting power and investment power over these shares. Does not include (i) 1,200 warrants issued and granted to Mr. Michiels under the 2013 Warrant Plan, which warrants are exercisable for 4,800 ordinary shares at €2.14 per share, vest on a yearly basis beginning in October 2013 and expire in 2023, (ii) 18,180 warrants issued and granted to Mr. Michiels under the 2014 Warrant Plan, which warrants are exercisable for 18,180 ordinary shares at €8.81 per share, vest 25% on a yearly basis beginning in October 2018 and expire in 2024 or (iii) 15,000 warrants issued and granted to Mr. Michiels under the 2015 Warrant Plan, which warrants are exercisable for 15,000 ordinary shares at €6.45 per share, vest 10% on September 2018, 20% on September 2019, 30% on September 2020 and 40% on September 2021, and expire in 2025.

(9) Does not include (i) 1,500 warrants issued and granted to Mr. Van der Schueren under the 2013 Warrant Plan, which warrants are exercisable for 6,000 ordinary shares at €2.14 per share, vest 25% on a yearly basis beginning in October 2018 and expire in 2023, (ii) 18,180 warrants issued and granted to Mr. Van der Schueren under the 2014 Warrant Plan, which warrants are exercisable for 18,180 ordinary shares at €8.81 per share, vest 25% on a yearly basis beginning in October 2018 and expire in 2024 or (iii) 15,000 warrants issued and granted to Mr. Van der Schueren under the 2015 Warrant Plan, which warrants are exercisable for 15,000 ordinary shares at €6.45 per share, vest 10% on September 2018, 20% on September 2019, 30% on September 2020 and 40% on September 2021, and expire in 2025.

(10) Consists of 1,284 ADSs held by Mr. Albrecht. Does not include (i) 18,180 warrants issued and granted to Mr. Albrecht under the 2014 Warrant Plan, which warrants are exercisable for 18,180 ordinary shares at €8.81 per share, vest 25% on a yearly basis beginning in October 2018 and expire in 2024 or (ii) 15,000 warrants issued and granted to Mr. Albrecht under the 2015 Warrant Plan, which warrants are exercisable for 15,000 ordinary shares at €6.45 per share, vest 10% on September 2018, 20% on September 2019, 30% on September 2020 and 40% on September 2021, and expire in 2025.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

The following table sets forth information relating to beneficial ownership of our ordinary shares, as of December 31, 2016, for each person who is known by us to own beneficially 5% or more of our outstanding ordinary shares:

	Ordinary Shares Beneficially Owned as of December 31, 2016	
Name of Beneficial Owner(1)	Number(2)	Percent(2)
Wilfried Vancraen(3)	33,095,964	69.9
Hilde Ingelaere(3)	33,095,964	69.9
Ailanthus NV(4)	13,428,688	28.4

(1) Except as otherwise indicated, the address for each of the persons named above is Technologielaan 15, 3001 Leuven, Belgium.

(2) Beneficial ownership is determined in accordance with the rules and regulations of the SEC. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we have included shares that the person has the right to acquire within 60 days of December 31, 2016, including through the exercise of any option, warrant or other right or the conversion of any other security. These shares, however, are not included in the computation of the percentage ownership of any other person. Except as otherwise indicated, we believe the persons named in this table have sole voting and investment power with respect to all ordinary shares shown as beneficially owned by them, subject to community property laws where applicable and to the information contained in the footnotes to this table.

(3) Consists of (i) 5,329,664 ordinary shares held by Wilfried Vancraen, (ii) 276,000 ordinary shares held by Hilde Ingelaere, (iii) 40,000 ADSs held by Mr. Vancraen, (iv) 14,021,612 ordinary shares jointly held by Mr. Vancraen and Ms. Ingelaere through Idem, a civil partnership (*burgerlijke maatschap / société civile de droit commun*) that is controlled and managed by Mr. Vancraen and Ms. Ingelaere, and (v) 13,428,688 ordinary shares held by Ailanthus NV, which is owned and controlled by Mr. Vancraen and Ms. Ingelaere. Mr. Vancraen and Ms. Ingelaere may be deemed to share voting power and investment power over these shares. Does not include (i) 1,500 warrants issued and granted to Mr. Vancraen or 1,500 warrants issued and granted to Ms. Ingelaere under the 2013 Warrant Plan, which warrants are exercisable for 6,000 ordinary shares and 6,000 ordinary shares, respectively, at €2.14 per share, vest 25% on a yearly basis beginning in October 2018 and expire in 2023, or (ii) 18,180 warrants issued and granted to Mr. Vancraen or 18,180 warrants issued and granted to Ms. Ingelaere under the 2014 Warrant Plan, which warrants are exercisable for 18,180 ordinary shares and 18,180 ordinary shares, respectively, at €8.81 per share, vest 25% on a yearly basis beginning in October 2018 and expire in 2024.

(4) Ailanthus NV is owned and controlled by Hilde Ingelaere, a member of our board of directors and one of our Executive Vice Presidents, and by Wilfried Vancraen, a member of our board of directors and our Chief Executive Officer. Mr. Vancraen and Ms. Ingelaere may be deemed to share voting power and investment power over these shares.

None of our shareholders have different voting rights from other shareholders, except that as long as the Family Shareholders control, directly or indirectly, in the aggregate at least 20% of the voting rights attached to our ordinary shares, a majority of our directors must be appointed by our shareholders from a list of candidates proposed by the Family Shareholders. We are not aware of any arrangement that may, at a subsequent date, result in a change of control of our company.

As of December 31, 2016, there were 28 individual holders of record entered in our share register. The number of individual holders of record is based exclusively upon our share register and does not address whether a share or shares may be held by the holder of record on behalf of more than one person or institution who may be deemed to be the beneficial owner of a share or shares in our company. As of December 31, 2016, 71.8% of our outstanding ordinary shares were held in Belgium by 28 holders of record. As of December 31, 2016, assuming that all of our ordinary shares represented by ADSs are held by residents of the United States, approximately 28.3% of our outstanding ordinary shares were held in the United States by one holder of record, the Bank of New York Mellon, depositary of the ADSs. At such date, there were outstanding 13,378,370 ADSs, each representing one of our ordinary shares, and in the aggregate representing approximately 28.3% of our outstanding ordinary shares. The actual number of holders is greater than these numbers of record holders, and includes beneficial owners whose ADSs are held in street name by brokers and other nominees. This number of holders of record also does not include holders whose shares may be held in trust by other entities.

B. Related Party Transactions

Since January 1, 2016, there has not been, nor is there currently proposed, any material transaction or series of similar material transactions to which we were or are a party in which any of the members of our board of directors or senior management, holders of more than 10% of any class of our voting securities, or any member of the immediate family of any of the foregoing persons, had or will have a direct or indirect material interest, other than the compensation and shareholding arrangements we describe in "Item 6. Directors, Senior Management and Employees" and "—A. Major Shareholders," and the transactions we describe below.

Ailanthus NV

Ailanthus NV, a shareholder and director that is owned and controlled by Mr. Vancraen and Ms. Ingelaere, has provided several loans and financial leases to us for the purchase of machinery and a portion of our office and production buildings.

As of December 31, 2016 we had one finance lease obligation with Ailanthus NV for our land and buildings in Leuven (a different finance lease obligation expired on March 31, 2013 and resulted in a transfer of ownership from of the related land and buildings Ailanthus to us). In October 2001, we entered into a finance lease agreement with Ailanthus NV to lease land and a portion of a new production building. The lease had a term of 15 years and included a purchase option for the land and the building. This finance lease expired on September 20, 2016 and we have decided to exercise the purchase option, scheduling the transfer of the land to take place in the first half of 2017 (subject to completion of all required formalities). For additional information, see Note 14 to our audited consolidated financial statements.

Ailanthus NV has granted us one other loan at a fixed interest rates of 4.23% with maturity in 2025. The purpose of the loan is to finance a building in France. For additional information, see Note 14 to our audited consolidated financial statements.

We rent apartments on a regular basis from Ailanthus NV in order to host our employees from foreign subsidiaries who are visiting our headquarters in Leuven. The total amount paid to Ailanthus NV for rent in 2016 was €0.13 million.

Convertible Bonds Issuance

On October 28, 2013 we issued to Mr. Leys and his spouse 1,000 convertible bonds at an issuance price of €1,000 per bond. The bonds have a maturity of seven years, bear an annual interest rate of 3.7% and can be converted into ordinary shares at a conversion price of €1.97 per share.

Registration Rights Agreement

On September 15, 2016, we entered into a registration rights agreement with certain holders of our ordinary shares, warrants and convertible bonds, including [certain of our directors, senior management and consultants], which we refer to as the Registration Rights Agreement. In accordance with the terms of the Registration Rights Agreement, we filed a shelf registration statement on Form F-3 to register up to 35,032,250 ordinary shares represented by 35,032,250 ADSs to be sold by the selling shareholders from time to time. These ordinary shares consist of ordinary shares previously issued to and ordinary shares issuable upon exercise of warrants or conversion of convertible bonds held by the selling shareholders, as well as ordinary shares underlying ADSs that were acquired by the selling shareholders on the NASDAQ Global Select Market.

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Financial Statements and Other Information

See "Item 3.A. Key Information—Selected Financial Data" and "Item 18. Financial Statements."

Legal or Arbitration Proceedings

From time to time, we may be subject to various claims or legal or arbitration proceedings that arise in the ordinary course of our business. We are currently involved in a legal proceeding with Dentsply Implants NV regarding the alleged wrongful termination of a supply agreement we entered into with Dentsply Implants NV in 2010. The court of first instance ruled in favor of Dentsply Implants NV that we have wrongfully terminated the relationship. We have appealed this decision before the court has pronounced itself on the monetary damages. The amount of damages which Dentsply Implants NV is claiming is €2.7 million. While we are confident about the chances that the first instance decision will be overruled, we believe that, in the event that the first instance decision would be confirmed, the amount of monetary damages that we would be exposed to, will not have a material impact in our business, financial conditions or result of operations. We are currently not a party to, and we are not aware of any threat of, any other legal or arbitration proceedings, which, in the opinion of our management, is likely to have or could reasonably possibly have a material adverse effect on our business, financial condition or results of operations.

Policy on Dividend Distribution

We have never declared or paid any cash dividends on our shares, and we have no present intention of declaring or paying any dividends in the foreseeable future. Any recommendation by our board of directors to pay dividends, subject to compliance with applicable law and any contractual provisions that restrict or limit our ability to pay dividends, including under agreements for indebtedness that we may incur, will depend on many factors, including our financial condition, results of operations, legal requirements, capital requirements, business prospects and other factors that our board of directors deems relevant.

All of the shares represented by the ADSs have the same dividend rights as all of our other outstanding shares. In general, distributions of dividends proposed by our board of directors require the approval of our shareholders at a shareholders' meeting, although our board of directors may declare interim dividends without shareholder approval.

Furthermore, pursuant to Belgian law, the calculation of amounts available for distribution to shareholders, as dividends or otherwise, must be determined on the basis of our non-consolidated statutory Belgian GAAP financial statements. In addition, in accordance with Belgian law and our articles of association, we must allocate each year an amount of at least 5% of our annual net profit under our statutory non-consolidated accounts (prepared in accordance with Belgian GAAP) to a legal reserve until the reserve equals 10% of our share capital. Our legal reserve currently meets this requirement. As a consequence of these facts there can be no assurance as to whether dividends or other distributions will be paid out in the future or, if they are paid, their amount.

For information regarding the Belgian withholding tax applicable to dividends and related U.S. reimbursement procedures, see "Item 10. Additional Information—E. Taxation—Belgian Taxation."

B. Significant Changes

None.

ITEM 9. THE OFFER AND LISTING

A. Offer and Listing Details

Price History

The ADSs, each representing one ordinary share, have been listed on the NASDAQ Global Select Market under the symbol "MTLS" since June 25, 2014. Prior to that date, there was no public trading market for ADSs or our ordinary shares.

The following table sets forth the reported high and low closing sale prices of the ADSs on the NASDAQ Global Select Market for the periods indicated:

	Per ADS (in $)	
	High	Low
Annual:		
June 25, 2014 (date of listing) to December 31, 2014	14.46	8.02
Year ended December 31, 2015	9.95	6.49
Year ended December 31, 2016	8.47	5.38
Quarterly:		
Three months ended March 31, 2015	9.95	6.70
Three months ended June 30, 2015	9.25	6.49
Three months ended September 30, 2015	9.91	7.22
Three months ended December 31, 2015	8.87	7.06
Three months ended March 31, 2016	8.38	5.38
Three months ended June 30, 2016	7.57	6.53
Three months ended September 30, 2016	7.91	6.11
Three months ended December 31, 2016	8.47	6.37
Three months ended March 31, 2017	9.35	7.25
Monthly:		
October 2016	8.47	6.83
November 2016	8.45	6.37
December 2016	8.41	7.54
January 2017	8.27	7.25
February 2017	9.35	8.23
March 2017	9.13	8.02
April 2017 (through April 27, 2017)	10.99	8.79

B. Plan of Distribution

Not applicable.

C. Markets

The ADSs have been listed on the NASDAQ Global Select Market under the symbol "MTLS" since June 25, 2014.

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.

F. Expenses of the Issue

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital

Not applicable.

B. Memorandum and Articles of Association

The information called for by this item has been reported previously in our registration statement on Form F-1 (Registration No. 333-194982) under the heading "Description of Share Capital," which is incorporated herein by reference, and is supplemented by the following additional information related to changes in our share capital:

The share capital of Materialise NV was increased following the exercise of warrants previously issued under our 2007 Warrant Plan on November 27, 2014, with €73,696 (including issuance premium) against the issuance of 75,200 new ordinary shares, and on November 20, 2015 with €96,040 (including issuance premium) against the issuance of 98,000 new ordinary shares. The 2007 Warrant Plan 2007 is now terminated. There are no outstanding warrants issued under this plan.

On March 5, 2015, the board of directors increased the share capital of Materialise NV by €578,917 (including issuance premium) against the issuance of 80,180 new ordinary shares, pursuant to the powers granted to it by the extraordinary general meeting of shareholders held on April 23, 2014.

On December 18, 2015, the board of directors adopted a new warrant plan, our 2015 Warrant Plan, and issued 1,400,000 warrants, which warrants are exercisable for 1,400,000 new ordinary shares, pursuant to the powers granted to it by the extraordinary general meeting of shareholders held on April 23, 2014. As of December 31, 2016, 350,000 of the warrants were granted.

C. Material Contracts

We have not entered into any material contracts in the prior two years other than in the ordinary course of business and other than those described elsewhere in "Item 7. Major Shareholders and Related Party Transactions—Related Party Transactions," "Item 10. Additional Information—Memorandum and Articles of Association," or elsewhere in this annual report, and the contracts we describe below.

D. Exchange Controls

There are no Belgian exchange control regulations that impose limitations on our ability to make, or the amount of, cash payments to residents of the United States. See "Item 5. Operating and Financial Review—G. Liquidity and Capital Resources—Transfers from Subsidiaries" for a discussion of various restrictions applicable to transfers of funds by our subsidiaries.

E. Taxation

Belgian Taxation

The following paragraphs are a summary of material Belgian tax consequences of the ownership of ADSs by an investor. The summary is based on laws, treaties and regulatory interpretations in effect in Belgium on the date of this document, all of which are subject to change, including changes that could have retroactive effect.

The summary only discusses Belgian tax aspects which are relevant to U.S. holders of ADSs, or Holders. This summary does not address Belgian tax aspects which are relevant to persons who are residents in Belgium or engaged in a trade or business in Belgium through a permanent establishment or a fixed base in Belgium. This summary does not purport to be a description of all of the tax consequences of the ownership of ADSs, and does not take into account the specific circumstances of any particular investor, some of which may be subject to special rules, or the tax laws of any country other than Belgium. This summary does not describe the tax treatment of investors that are subject to special rules, such as banks, insurance companies, collective investment undertakings, dealers in securities or currencies, persons that hold, or will hold, ADSs in a position in a straddle, share-repurchase transaction, conversion transactions, synthetic security or other integrated financial transactions. Investors should consult their own advisers regarding the tax consequences of an investment in ADSs in the light of their particular circumstances, including the effect of any state, local or other national laws.

In addition to the assumptions mentioned above, it is also assumed in this discussion that for purposes of the domestic Belgian tax legislation, the owners of ADSs will be treated as the owners of the ordinary shares represented by such ADSs. However, the assumption has not been confirmed or verified with the Belgian Tax Administration.

Dividend Withholding Tax

As a general rule, a withholding tax of 30% is levied on the gross amount of dividends paid on the ordinary shares represented by the ADSs, subject to such relief as may be available under applicable domestic or tax treaty provisions. Dividends subject to the dividend withholding tax include all benefits attributed to the ordinary shares represented by the ADSs, irrespective of their form, as well as reimbursements of statutory share capital by us, except reimbursements of fiscal capital made in accordance with the Belgian Company Code. In principle, fiscal capital includes paid-up statutory share capital, and subject to certain conditions, the paid-up issue premiums and the cash amounts subscribed to at the time of the issue of profit sharing certificates.

In case of a redemption by us of own shares represented by ADSs, the redemption distribution (after deduction of the portion of fiscal capital represented by the redeemed shares) will be treated as a dividend which in certain circumstances may be subject to a withholding tax of 30%, subject to such relief as may be available under applicable domestic or tax treaty provisions. In case of a liquidation of our Company, any amounts distributed in excess of the fiscal capital will be subject to a 30% withholding tax, subject to such relief as may be available under applicable domestic or tax treaty provisions.

For non-resident individuals and companies, the dividend withholding tax will be the only tax on dividends in Belgium, unless the non-resident holds ADSs in connection with a business conducted in Belgium, through a fixed base in Belgium or a Belgian permanent establishment.

Relief of Belgian Dividend Withholding Tax

Under the Belgium-United States Tax Treaty, or the Treaty, under which we are entitled to benefits accorded to residents of Belgium, there is a reduced Belgian withholding tax rate of 15% on dividends paid by us to a U.S. resident which beneficially owns the dividends and is entitled to claim the benefits of the Treaty under the limitation of benefits article included in the Treaty, or Qualifying Holders. If such Qualifying Holder is a company that owns directly at least 10% of our voting stock, the Belgian withholding tax rate is further reduced to 5%. No withholding tax is however applicable if the Qualifying Holder, is: (i) a company that is a resident of the United States that has owned directly ADSs representing at least 10% of our capital for a 12-month period ending on the date the dividend is declared, or (ii) a pension fund that is a resident of the United States, provided that such dividends are not derived from the carrying on of a business by the pension fund or through an associated enterprise.

Under the normal procedure, we or our paying agent must withhold the full Belgian withholding tax (without taking into account the Treaty rate). Qualifying Holders may make a claim for reimbursement for amounts withheld in excess of the rate defined by the Treaty. The reimbursement form (Form 276 Div-Aut.) may be obtained from the Bureau Central de Taxation Bruxelles-Etranger, 33 Boulevard Roi Albert II, 33 (North Galaxy Tower B7), 1030 Brussels, Belgium. Qualifying Holders may also, subject to certain conditions, obtain the reduced Treaty rate at source. Qualifying Holders should deliver a duly completed Form 276 Div-Aut. no later than ten days after the date on which the dividend becomes payable. U.S. holders should consult their own tax advisors as to whether they qualify for reduction in withholding tax upon payment or attribution of dividends, and as to the procedural requirements for obtaining a reduced withholding tax upon the payment of dividends or for making claims for reimbursement.

Withholding tax is also not applicable, pursuant to Belgian domestic tax law, on dividends paid to certain U.S. pension funds that are not engaged in any business or other profit making activity and are exempted from income taxes in the United States, provided that such pension fund is not contractually obligated to redistribute the dividends to any beneficial owner of such dividends for whom it would manage the ADSs and subject to certain procedural formalities.

Finally, a reduced withholding tax rate of 1.6995% is available, pursuant to Belgian domestic tax law, to dividends paid to a non-resident corporate shareholder (located in the European Economic Area or in a country with which Belgium has entered in a double tax treaty including sufficient information exchange provisions) to the extent that it holds a participation in our company representing less than 10% of our capital but the acquisition value of which is at least €2.5 million and provided that certain other conditions are met, i.e. that (i) this holding has been held in full ownership for an uninterrupted period of at least one year (ii) this non-resident corporate shareholder is subject to a corporate income tax regime similar to Belgian corporate income tax regime without benefitting from a notably advantageous tax regime as compared to the ordinary income tax regime, (iii) its legal form is (similar to one of the legal forms) listed in the annex I, part A, of the E.U. directive dated 30 November 2011 (2011/96/EU). This reduced withholding tax will apply only if and to the extent that the ordinary Belgian withholding tax cannot be credited or reimbursed to the non-resident corporate shareholder referred to below and subject to certain procedural formalities.

Capital Gains and Losses

Pursuant to the Treaty, capital gains and/or losses realized by a Qualifying Holder from the sale, exchange or other disposition of ADSs do not fall within the scope of application of Belgian domestic tax law.

Capital gains realized on ADSs by a corporate Holder which is not entitled to claim the benefits of the Treaty under the limitation of benefits article included in the Treaty are generally not subject to taxation in Belgium unless the corporate Holder is acting through a Belgian permanent establishment. Capital losses are not deductible.

Private individual Holders who are not entitled to claim the benefits of the Treaty under the limitation of benefits article included in the Treaty and which are holding ADSs as a private investment will, as a rule, not be subject to tax on any capital gains arising out of a disposal of ADSs. Losses will, as a rule, not be deductible in Belgium.

However, if the gain realized by such individual Holders on ADSs is deemed to be realized outside the scope of the normal management of such individual's private estate and the capital gain is obtained or received in Belgium, the gain will be subject to a final professional withholding tax of 30.28%. The Official Commentary to the ITC 1992 stipulates that occasional transactions on a stock exchange regarding ADSs should not be considered as transactions realized outside the scope of normal management of one's own private estate.

Capital gains realized by such individual Holders on the disposal of ADSs for consideration, outside the exercise of a professional activity, to a non-resident company (or a body constituted in a similar legal form), to a foreign state (or one of its political subdivisions or local authorities) or to a non-resident legal entity who is established outside the European Economic Area, are in principle taxable at a rate of 16.5% if, at any time during the five years preceding the sale, such individual Holders has owned directly or indirectly, alone or with his/her spouse or with certain relatives, a substantial shareholding in us (that is, a shareholding of more than 25% of our shares).

Capital gains realized by a Holder upon the redemption of ADSs or upon our liquidation will generally be taxable as a dividend. See "— Dividend Withholding Tax."

Estate and Gift Tax

There is no Belgian estate tax on the transfer of ADSs upon the death of a Belgian non-resident.

Donations of ADSs made in Belgium may or may not be subject to gift tax in Belgium depending on the modalities under which the donation is carried out.

Belgian Tax on Stock Exchange Transactions

A tax on stock exchange transactions (*taxe sur les operations de bourse/taks op de beursverrichtingen*) is generally levied on the purchase and the sale, and on any other acquisition and transfer for consideration of existing ADSs on the secondary market carried out by a Belgian resident investor through a professional intermediary if (i) executed in Belgium through a professional intermediary, or (ii) deemed to be executed in Belgium, which is the case if the order is directly or indirectly made to a professional intermediary established outside of Belgium, either by private individuals having their usual residence in Belgium, or legal entities for the account of their seat or establishment in Belgium.

The applicable rate amounts to 0.27% of the consideration paid but with a cap of €1,600 per transaction and per party. The tax is due separately from each party to any such transaction, i.e., the seller (transferor) and the purchaser (transferee), both collected by the professional intermediary.

However, if the intermediary is established outside of Belgium, the tax will in principle be due by the ordering private individual or legal entity, unless that individual or entity can demonstrate that the tax has already been paid. Professional intermediaries established outside of Belgium can, subject to certain conditions and formalities, appoint a Belgian representative for tax purposes, which will liable for the tax on stock exchange transactions in respect of the transactions executed through the professional intermediary.

Belgian non-residents who purchase or otherwise acquire or transfer, for consideration, ADSs in Belgium for their own account through a professional intermediary may be exempt from the stock market tax if they deliver a sworn affidavit to the intermediary in Belgium confirming their non-resident status.

In addition to the above, no stock market tax is payable by: (i) professional intermediaries described in Article 2, 9° and 10° of the Law of August 2, 2002 acting for their own account, (ii) insurance companies described in Article 2, §1 of the Law of 9 July 1975 acting for their own account, (iii) professional retirement institutions referred to in Article 2, 1° of the Law of October, 27 2006 relating to the control of professional retirement institutions acting for their own account, or (iv) collective investment institutions acting for their own account.

No stock exchange tax will thus be due by Holders on the subscription, purchase or sale of ADSs, if the Holders are acting for their own account. In order to benefit from this exemption, the Holders must file with the professional intermediary in Belgium a sworn affidavit evidencing that they are non-residents for Belgian tax purposes.

Proposed Financial Transactions Tax

The European Commission has published a proposal for a Directive for a common financial transactions tax, or FTT, in Belgium, Germany, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia, or collectively, the Participating Member States.

The proposed FTT has a very broad scope and could, if introduced in its current form, apply to certain dealings in ADSs in certain circumstances. Under current proposals, the FTT could apply in certain circumstances to persons both within and outside of the Participating Member States. Generally, it would apply to certain dealings in ADSs where at least one party is a financial institution, and at least one party is established in a Participating Member State.

A financial institution may be, or be deemed to be, "established" in a Participating Member State in a broad range of circumstances, including by transacting with a person established in a Participating Member State.

The FTT proposal remains subject to negotiation between the Participating Member States. It may therefore be altered prior to any implementation, the timing of which remains unclear. Additional EU Member States may decide to participate. Prospective Holders of ADSs are advised to seek their own professional advice in relation to the FTT.

U.S. Taxation

The following is a discussion of the material U.S. federal income tax considerations to U.S. holders (as defined below) of acquiring, holding and disposing of the ADSs. The following discussion applies only to U.S. holders that purchase ADSs in the Offering, will hold ADSs as capital assets for U.S. federal income tax purposes (generally, assets held for investment) and that are not residents of, or ordinarily resident in, Belgium for tax purposes nor hold their ADSs as part of a permanent establishment in Belgium. The discussion also does not address any aspect of U.S. federal taxation other than U.S. federal income taxation. In particular, this summary does not address all tax considerations applicable to investors that own (directly or by attribution) 10% or more of our voting stock, nor does this summary discuss all of the tax considerations that may be relevant to certain types of investors subject to special treatment under the U.S. federal income tax laws (such as financial institutions, insurance companies, real estate investment trusts, regulated investment companies, investors liable for the alternative minimum tax, certain U.S. expatriates, individual retirement accounts and other tax-deferred accounts, partnerships or other pass-through entities for U.S. federal income tax purposes, tax-exempt organizations, dealers in securities or currencies, securities traders that elect mark-to-market tax accounting, investors that will hold the ADSs as part of constructive sales, straddles, hedging, integrated or conversion transactions for U.S. federal income tax purposes or investors whose "functional currency" is not the U.S. dollar).

The following summary is based on the U.S. Internal Revenue Code of 1986, as amended, or the Code, U.S. Treasury Regulations thereunder, published rulings of the U.S. Internal Revenue Service, or the IRS, the income tax treaty between the United States and Belgium, or the U.S.-Belgium Treaty, and judicial and administrative interpretations thereof, in each case as available on the date of this annual report. Changes to any of the foregoing, or changes in how any of these authorities are interpreted, may affect the tax consequences set out below, possibly retroactively. No ruling will be sought from the IRS with respect to any statement or conclusion in this discussion, and there can be no assurance that the IRS will not challenge such statement or conclusion in the following discussion or, if challenged, a court will uphold such statement or conclusion.

For purposes of the following summary, a "U.S. holder" is a beneficial owner of ADSs that is for U.S. federal income tax purposes: (i) a citizen or individual resident of the United States, (ii) a corporation or other entity treated as a corporation for U.S. federal income tax purposes created or organized in or under the laws of the United States or any state thereof (including the District of Columbia), (iii) an estate, the income of which is subject to U.S. federal income taxation regardless of its source or (iv) a trust if (x) a court within the United States is able to exercise primary supervision over its administration and (y) one or more United States persons (as defined in the Code) have the authority to control all of the substantial decisions of such trust.

If a partnership (including any entity treated as a partnership for U.S. federal income tax purposes) holds ADSs, the U.S. federal income tax consequences to the partners of such partnership will depend on the activities of the partnership and the status of the partners. A partnership considering an investment in ADSs, and partners in such partnership, should consult their own tax advisers about the consequences of the investment.

We do not expect to be a Passive Foreign Investment Company, or a PFIC, and the discussion under "—Distributions by Us" and "—Proceeds from the Sale, Exchange or Retirement of the ADSs" below assumes we will not be a PFIC. See "—Passive Foreign Investment Company" discussion below.

Prospective purchasers of ADSs should consult their own tax advisers with respect to the U.S. federal, state, local and non-U.S. tax consequences to them in their particular circumstances of acquiring, holding, and disposing of, ADSs.

Ownership of ADSs in General

The discussion below is based, in part, on representations by the Depositary and assumes that each obligation under the deposit agreement and any related agreement will be performed in accordance with its terms.

For U.S. federal income tax purposes, an owner of ADSs generally will be treated as the owner of the ordinary shares represented by such ADSs. However, the U.S. Treasury has expressed concerns that parties to whom interests such as the ADSs are delivered in transactions similar to pre-release transactions may be taking actions that are inconsistent with the claiming of foreign tax credits for U.S. holders of ADSs. Accordingly, the analysis of the creditability of Belgian taxes could be affected by actions taken by parties to whom the ADSs are pre-released. No gain or loss will be recognized if you exchange ADSs for the ordinary shares represented by those ADSs. Your tax basis in such ordinary shares will be the same as your tax basis in such ADSs, and the holding period in such ordinary shares will include the holding period in such ADSs.

Distributions by Us

Subject to the application of the passive foreign investment company rules discussed below, the U.S. dollar value of distributions paid by us (including the amount of any taxes withheld) out of its earnings and profits, as determined under U.S. federal income tax principles, will be subject to tax as foreign source ordinary dividend income and will be includible in your gross income upon receipt by the Depositary. However, we do not maintain calculations of its earnings and profits in accordance with U.S. federal income tax accounting principles. U.S. holders should therefore assume that any distribution by us with respect to ordinary shares or ADSs will constitute ordinary dividend income. Subject to applicable limitations, so long as the ADSs are regularly traded on the NASDAQ Global Select Market, we expect that dividends paid by us will be classified as "qualified dividend income" generally subject to tax at lower rates than other items of ordinary income when received by individuals and other non-corporate U.S. holders. Dividends received on the ordinary shares or ADSs will not be eligible for the dividends received deduction allowed to corporations receiving dividends from U.S. corporations.

The U.S. dollar value of distributions paid by us will be calculated by reference to the exchange rate in effect on the date the dividend distribution is received by the Depositary, regardless of when the Depositary converts the payments into U.S. dollars. If the foreign currency is converted by the Depositary on a later date, a U.S. holder will be required to recognize foreign currency gain or loss in respect of the foreign currency based on the difference between the rate at which it is converted and the rate on the date the dividend was received by the Depositary.

Subject to certain limitations, Belgian withholding tax, if any, paid in connection with any distribution with respect to ordinary shares or ADSs may be claimed as a credit against your U.S. federal income tax liability if you elect not to take a deduction for any non-U.S. income taxes for that taxable year; otherwise, such Belgian withholding tax may be taken as a deduction. If you are eligible for benefits under the Treaty or are otherwise entitled to a refund for the taxes withheld, you will not be entitled to a foreign tax credit or deduction for the amount of any Belgian taxes withheld in excess of the maximum rate under the Treaty or for the taxes with respect to which you can obtain a refund from the Belgian taxing authorities. As the relevant rules are very complex, you should consult your own tax advisor concerning the availability and utilization of the foreign tax credit or deductions for non-U.S. taxes in your particular circumstances.

Proceeds from the Sale, Exchange or Retirement of the ADSs

Upon the sale, exchange or retirement of ADSs, a U.S. holder will generally recognize U.S. source capital gain or loss equal to the difference, if any, between the U.S. dollar amount realized on the sale, exchange or retirement and the U.S. holder's tax basis in the ADSs (generally their cost in U.S. dollars). Any gain or loss generally will be long-term capital gain or loss if the ADSs have been held for more than a year. The deductibility of capital losses is subject to limitations.

Gain or loss you recognize on the sale, exchange or retirement of ADSs will generally be U.S. source. If any taxes are withheld from such amounts but are eligible to be refunded, you will not be entitled to a foreign tax credit or deduction with respect to such taxes. If there are amounts withheld that are not eligible to be refunded, you still may not be able to claim a foreign tax credit with respect to such amounts unless you have excess foreign source income of the correct type from other sources because foreign tax credits generally cannot be used against U.S. source income. As the relevant rules are very complex, you should consult your own tax advisor concerning the availability and utilization of the foreign tax credit or deductions for non-U.S. taxes in your particular circumstances.

Passive Foreign Investment Company

We believe that we were not a PFIC for the tax year ended December 31, 2016, and we do not expect to be classified as a PFIC for U.S. federal income tax purposes for the current tax year ending December 31, 2017, or for the foreseeable future. However, the application of the relevant rules to our businesses is not entirely clear and certain aspects of the relevant tests will be outside our control; therefore, no assurance can be given that we will not be a PFIC for any taxable year. If we are a PFIC at any time during the holding period of a U.S. holder, the U.S. holder would be subject to potentially materially greater amounts of tax and subject to additional U.S. tax form filing requirements. In addition, a non-corporate U.S. holder will not be eligible for qualified dividend income treatment on dividends received from us if we are treated as a PFIC for the taxable year in which the dividends are received or for the preceding taxable year.

A non-U.S. corporation is a PFIC in any taxable year in which, after taking into account certain look-through rules, either (i) at least 75% of its gross income is passive income or (ii) at least 50% of the average value (determined on a quarterly basis) of its assets is attributable to assets that produce or are held to produce passive income. Passive income generally includes dividends, interest, rents, royalties, gross income from certain commodities transactions, and capital gains. If a non-U.S. corporation owns at least 25% by value of the stock of another corporation, the foreign corporation is treated for purposes of the PFIC tests as owning its proportionate share of the assets of the other corporation, and as receiving directly its proportionate share of the other corporation's income. Although the determination of whether a non-U.S. corporation is a PFIC for a given taxable year is based on its income and assets for that taxable year, as determined under the PFIC rules, once a non-U.S. corporation is a PFIC for any taxable year, it generally remains a PFIC for any investors that owned interests in all or a portion of such taxable year even if it would not otherwise qualify as a PFIC in later taxable years. We do not undertake to monitor our PFIC status on an ongoing basis.

The Code imposes additional taxes on gains from the sale or other disposition of, and "excess distributions" with respect to, shares of a PFIC owned directly (or deemed to be owned directly or indirectly under certain attribution rules) by a U.S. holder. In general, an excess distribution is any distribution to the U.S. holder that is greater than 125% of the average annual distributions received by the U.S. holder (including return of capital distributions) during the three preceding taxable years or, if shorter, the U.S. holder's holding period for the ADSs. If we were a PFIC in any year in which a U.S. holder held the ADSs (i) the gain or excess distribution would be allocated ratably over the U.S. holder's holding period for the ADSs, (ii) the amount allocated to the taxable year in which the gain or excess distribution was realized and to any year before we became a PFIC would be taxable as ordinary income, (iii) the amount allocated to each other prior year would be subject to tax at the highest rate in effect for that year and (iv) the interest charge generally applicable to underpayments of tax would be imposed in respect of the tax allocated to each such year. For these purposes, a U.S. holder who uses the ADSs as collateral for a loan would be treated as having disposed of such ADSs.

Different rules apply to a U.S. holder that makes a valid mark-to-market election with respect to the ADSs. This election can be made if the ADSs are considered to be "marketable securities" for purposes of the PFIC rules. The ADSs should be marketable securities for these purposes to the extent they are "regularly traded" on the NASDAQ Global Select Market. Generally, shares are treated as "regularly traded" in any calendar year in which more than a de minimis quantity of the shares are traded on a qualified exchange on at least 15 days during each calendar quarter. Subject to certain limitations, a U.S. holder that makes a valid mark-to-market election with respect to the ADSs would be required to take into account the difference, if any, between the fair market value at the end of each taxable year and the fair market value at the end of the preceding taxable year (or the acquisition price in the first year the election is in effect) of those ADSs, as ordinary income or ordinary loss (but only to the extent of the net amount previously included as income by the U.S. holder as a result of the mark-to-market election). A U.S. holder's basis in the ADSs will be increased by the amount of any ordinary income inclusion and decreased by the amount of any ordinary loss taken into account under the mark-to-market rules. Gains from an actual sale or other disposition of the ADSs for which this election has been properly made would be treated as ordinary income, any losses incurred on a sale or other disposition of the ADSs would be treated as an ordinary loss to the extent of any net mark-to-market gains for prior years and any additional loss would be capital loss.

Even if a valid mark-to-market election is made with respect to the ADSs, there is a significant risk that indirect interests in any of our subsidiaries that are PFICs will not be covered by this election but will be subject to the excess distribution rules described above. Under these rules, distribution from, and dispositions of interests in, these subsidiaries, as well as certain other transactions, generally will be treated as a distribution or disposition subject to the discussion above regarding excess distributions.

Investors in certain PFICs are able to make an election to treat the PFIC as a "qualified electing fund," or QEF, which may mitigate the consequences of the rules described above. However, if we are classified as a PFIC, U.S. holders will not be able to make this election.

Prospective U.S. holders are urged to consult their own tax advisers about the consequences of holding the ADSs if we are considered a PFIC in any taxable year, including the availability of the mark-to-market election, and whether making the election would be advisable in their particular circumstances. In particular, U.S. holders should consider carefully the impact of a mark-to-market election with respect to their ADSs given that there is a significant risk that we will have subsidiaries that are classified as PFICs.

Medicare Tax

Certain U.S. holders who are individuals, estates and trusts will be required to pay an additional 3.8% tax on some or all of their "net investment income," which generally includes its dividend income and net gains from the disposition of the ADSs. U.S. holders should consult their own tax advisors regarding the applicability of this additional tax on their particular situation.

Information Reporting and Backup Withholding

Information returns may be filed with the IRS in connection with distributions on the ADSs and the proceeds from the sale or other disposition of the ADSs unless a U.S. holder establishes that it is exempt from the information reporting rules. A U.S. holder may be subject to backup withholding on these payments if it fails to provide its tax identification number to the paying agent and comply with certain certification procedures. The amount of any backup withholding from a payment to a U.S. holder will be allowed as a credit against its U.S. federal income tax liability and may entitle the U.S. holder to a refund, provided that the required information is timely furnished to the IRS.

Tax Return Disclosure Requirement

U.S. federal income tax law requires certain U.S. investors to disclose information relating to investments in securities of a non-U.S. issuer. Failure to comply with applicable disclosure requirements could result in the imposition of substantial penalties. U.S. holders should consult their own tax advisors regarding any disclosure obligations.

F. Dividends and Paying Agents

Not applicable.

G. Statement by Experts

Not applicable.

H. Documents on Display

We previously filed with the SEC our registration statement on Form F-1 (Registration No. 333-194982), as amended, and our registration statement on Form F-3 (Registration No. 333-213649), including the prospectuses contained therein, to register our ordinary shares. We have also filed with the SEC a related registration statement on F-6 (Registration No. 333-196734) to register the ADSs.

We are subject to the periodic reporting and other informational requirements of the Exchange Act as applicable to foreign private issuers. Our annual reports on Form 20-F are due within four months after each fiscal year end. We are not required to disclose certain other information that is required from U.S. domestic issuers. Also, as a foreign private issuer, we are exempt from the rules of the Exchange Act prescribing the furnishing of proxy statements to shareholders and our directors, senior management and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act.

Reports and other information we file may be reviewed and copied at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. You may also request copies of these documents upon payment of a duplicating fee by writing to the SEC. For further information on the public reference facility, please call the SEC at 1-800-SEC-0330. Our SEC filings, including the registration statement, are also available to you on the SEC's website at http://www.sec.gov.

We have filed our amended and restated articles of association and all other deeds that are to be published in the annexes to the Belgian State Gazette with the clerk's office of the Commercial Court of Leuven (Belgium), where they are available to the public. A copy of our amended and restated articles of association is also be publicly available as an exhibit to our registration statement on Form F-1 (registration No. 333-194982). In accordance with Belgian law, we must prepare audited annual statutory and consolidated financial statements. The audited annual statutory and consolidated financial statements and the reports of our board and statutory auditor relating thereto are filed with the Belgian National Bank, where they are available to the public.

I. Subsidiary Information

Not applicable.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk from fluctuations in interest rates and foreign currency exchange rates which may adversely affect our results of operations and financial condition. We seek to minimize these risks through regular operating and financing activities.

Interest Rate Risk

Our outstanding loans are primarily fixed interest rate loans and we therefore are not subject to market risk associated with immediate changes in interest rates.

Foreign Exchange Rate Risk

We transact business globally and are subject to risks associated with fluctuating foreign exchange rates. The geographic areas outside of the Eurozone to which we sell our products and services are generally not considered to be highly inflationary. In the years ended December 31, 2016, 2015 and 2014, 32%, 32% and 27% of our revenue, respectively, were derived from sales in a currency different from the euro. Receivables denominated in a foreign currency are initially recorded at the exchange rate at the transaction date and subsequently re-measured in euro based on period-end exchange rates. Transaction gains and losses that arise from exchange rate fluctuations are charged to income.

Additionally, we are exposed to credit risk, liquidity risk and challenges related to capital management.

Credit risk

Credit risk is the risk that third parties may not meet their contractual obligations resulting in a loss for us. We are exposed to credit risk from our operating activities and from our financing activities, which are mainly deposits with financial institutions. We limit this exposure by contracting with credit-worthy business partners or with financial institutions which meet high credit rating requirements. In addition, the portfolio of receivables is monitored on a continuous basis. Credit risk is limited to a specified amount with regard to individual receivables.

Liquidity risk

The liquidity risk is that we may not have sufficient cash to meet our payment obligations. This risk is countered by day-by-day liquidity management at the corporate level. We have has historically entered into financing and lease agreements with financial institutions to finance significant projects and certain working capital requirements. We still have undrawn lines of credit totaling K€3,063 at December 31, 2016 (2015: K€4,355; 2014: K€4,320). These line of credit arrangements do not contain significant financial covenants.

Capital management

The primary objective of our capital management strategy is to ensure we maintain healthy capital ratios to support our business and maximize shareholder value. Capital is defined as our shareholders' equity.

We consistently review our capital structure and make adjustments in light of changing economic conditions. We made no changes to our capital management objectives, policies or processes during the years ended December 31, 2016, 2015 and 2014.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

D. American Depositary Shares

Bank of New York Mellon serves as the depositary for the ADSs. Each ADS represents one ordinary share (or a right to receive one ordinary share) deposited with the principal Amsterdam office of ING Securities Services, Inc., as custodian for the depositary. Each ADS also represents any other securities, cash or other property which may be held by the depositary. The depositary's corporate trust office at which the ADSs will be administered is located at 101 Barclay Street, New York, New York 10286. The Bank of New York Mellon's principal executive office is located at One Wall Street, New York, New York 10286.

A deposit agreement among us, the depositary and the ADS holders sets out the ADS holder rights as well as the rights and obligations of the depositary. New York law governs the deposit agreement and the ADRs. A copy of the deposit agreement is incorporated by reference as an exhibit to this annual report on Form 20-F.

Pursuant to the terms of the deposit agreement, you, as an ADS holder, will be required to pay the following fees to the depositary:

Persons depositing or withdrawing ordinary shares or ADS holders must pay to the depositary:	**For:**
$5.00 (or less) per 100 ADSs (or portion of 100 ADSs)	Issuance of ADSs, including issuances resulting from a distribution of ordinary shares or rights or other property
	Cancellation of ADSs for the purpose of withdrawal, including if the deposit agreement terminates
$0.05 (or less) per ADS	Any cash distribution to you
A fee equivalent to the fee that would be payable if securities distributed to you had been ordinary shares and the shares had been deposited for issuance of ADSs	Distribution of securities distributed to holders of deposited securities which are distributed by the depositary to you
$0.05 (or less) per ADS per calendar year	Depositary services
Registration or transfer fees	Transfer and registration of ordinary shares on our share register to or from the name of the depositary or its agent when you deposit or withdraw shares
Expenses of the depositary	Cable, telex and facsimile transmissions (when expressly provided in the deposit agreement) converting foreign currency to U.S. dollars
Taxes and other governmental charges the depositary or the custodian has to pay on any ADS or ordinary shares underlying an ADS, such as share transfer taxes, stamp duty or withholding taxes	As necessary
Any charges incurred by the depositary or its agents for servicing the deposited securities	As necessary

The depositary collects its fees for delivery and surrender of ADSs directly from investors depositing ordinary shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of distributable property to pay the fees. The depositary may collect its annual fee for depositary services by deduction from cash distributions or by directly billing investors or by charging the book-entry system accounts of participants acting for them. The depositary may collect any of its fees by deduction from any cash distribution payable to ADS holders that are obligated to pay those fees. The depositary may generally refuse to provide fee-based services until its fees for those services are paid.

From time to time, the depositary may make payments to us to reimburse or share revenue from the fees collected from ADS holders, or waive fees and expenses for services provided, generally relating to costs and expenses arising out of establishment and maintenance of the ADS program. In performing its duties under the deposit agreement, the depositary may use brokers, dealers or other service providers that are affiliates of the depositary and that may earn or share fees or commissions.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

Material Modifications to the Rights of Security Holders

None.

Use of Proceeds

Our Registration Statement on Form F-1 (Registration No. 333-194982), relating to our underwritten initial public offering of ADSs, each representing one ordinary share with no nominal value per share, was declared effective by the SEC on June 24, 2014. On June 30, 2014, we consummated our initial public offering and sold 8,000,000 ADSs at a public offering price of $12.00 per ADS for an aggregate offering price of $96.0 million. We received net proceeds from our initial public offering of approximately $88.3 million, after deducting the underwriting discount of approximately $6.7 million and offering expenses of approximately $2.4 million, and reimbursement by the underwriters of certain offering expenses. On July 7, 2014, certain selling shareholders that participated in our initial public offering sold 1,200,000 ADSs at a public offering price of $12.00 per ADS pursuant to the underwriters' exercise in full of their over-allotment option for an aggregate offering price of $14.4 million. We did not receive any of the proceeds from the sale of ADSs by the selling shareholders. Piper Jaffray & Co. and Credit Suisse Securities (USA) LLC acted as joint book-running managers for the offering.

During the year ended December 31, 2016, the net proceeds from our initial public offering were used as a buffer for our working capital, unfinanced capital expenditures, financing activities and general corporate purposes. However, as a result of our positive cash flow, our cash equivalents increased to €55.9 million from €50.7 million as of December 31, 2015.

ITEM 15. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2015. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost benefit relationship of possible controls and procedures. Based on this evaluation, management concluded as of December 31, 2015 that our disclosure controls and procedures were not effective at the reasonable assurance level due to material weaknesses in our internal control over financial reporting, which is described below under "Management's Annual Report on Internal Control Over Financial Reporting."

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is a process designed by, or under the supervision of, our Chief Executive Officer and Chief Financial Officer and effected by our management and other personnel to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of our financial statements for external reporting purposes in accordance with IFRS. Internal control over financial reporting includes policies and procedures that pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets; provide reasonable assurance that transactions are recorded as necessary to permit preparation of our financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with the authorization of our board of directors and management; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatement. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with our policies and procedures may deteriorate.

Our management, including our Chief Executive Officer and Chief Financial Officer, has conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2016, based on the updated framework in the Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. Management has concluded that our internal control over financial reporting was not effective as of December 31, 2016. Although many individual policies, procedures and controls are in place and appropriate financial systems have been, and are being, implemented to establish an effective internal control environment, and management believes some progress has been made in our developing an effective internal control environment since December 31, 2015, there continues to be material weaknesses identified by our management in our internal control over financial reporting related to the lack of an overall, formalized framework and common policies, IT general controls, and procedures and controls for financial consolidation and reporting, all of which are either not designed and in place or not operating effectively. As a result, a number of adjustments to our consolidated financial statements were identified and made during the course of the audit, the most important of which related to adjustments in our accounting for joint-ventures under IFRS and the disclosure of certain tax credits as non-current assets. In addition, we identified a classification error related to our reporting of deferred income being reported as current instead of non-current liabilities. Specifically, through September 30, 2016, we presented all deferred income associated with maintenance and license contracts and project contracts as a current liability when, in fact, a portion of such deferred income related to contractual periods that were more than 12 months after the reporting date and therefore such portion should have been presented as non-current. We detected this at December 31, 2016 as part of our year-end close process and have corrected this (See note 2 to our consolidated financial statements).These corrections had no impact on our consolidated income statements, the computations of our basic and diluted earnings per share, our consolidated statements of comprehensive income, our consolidated statements of changes in equity or our consolidated cash flow statements for the years ended December 31, 2015 and 2014.

Notwithstanding the identified material weaknesses and management's assessment that internal control over financial reporting was ineffective as of December 31, 2016, management believes that the audited consolidated financial statements contained in this Annual Report on Form 20-F fairly present, in all material respects, our financial condition, results of operations and cash flows for the fiscal years presented in conformity with IFRS.

As an emerging growth company, we have taken, and are taking, actions to remediate the material weaknesses in our internal control over financial reporting. Key elements of the remediation effort made and being made, include, but are not limited to, the following initiatives:

- Continuing to establish an overall, formalized framework and adopt and implement common policies, procedures and controls for financial consolidation and reporting, including defining user-access rights to our financial systems, formalizing approval, review and reporting protocols, enhancing our information systems and lines of communication, and formalizing effective information technology policies and procedures; and
- Continuing to communicate roles and responsibilities to all personnel involved with or having an impact on the financial reporting function, providing the necessary training to personnel and building internal control knowledge.

We believe that the measures described above will assist in remediating the material weaknesses identified above and further strengthen our internal control over financial reporting. As we continue to evaluate and work to improve our internal control over financial reporting, we may determine that additional measures are necessary to address any future control deficiencies.

Attestation Report of the Registered Public Accounting Firm

This annual report does not include an attestation report of our independent registered public accounting firm because the JOBS Act provides an exemption from such requirement as we qualify as an emerging growth company.

Changes in Internal Control over Financial Reporting

With the oversight of senior management and our audit committee, and prior to the issuance of the December 31, 2016 financial statements, we have put into place a comprehensive plan to continue to remediate the underlying causes of the identified material weaknesses, which are described above under "Management's Annual Report on Internal Control Over Financial Reporting."

In addition, during the year ended December 31, 2016, we took certain actions to remediate the material weakness in our internal control over financial reporting as of December 31, 2015 that was previously identified by our management and described in our annual report on Form 20-F for the fiscal year ended December 31, 2015. The key elements of the remediation effort during 2016, included, but were not limited to, the following initiatives:

(i) Building an overall, formalized framework and adopting and implementing common policies, procedures and controls for financial consolidation and reporting, including defining user-access rights to our financial systems, formalizing approval, review and reporting protocols, enhancing our information systems and lines of communication, and formalizing effective information technology policies and procedures; and

(ii) Communicating roles and responsibilities to all personnel involved with or having an impact on the financial reporting function, providing the necessary training to personnel and building internal control knowledge.

Other than as discussed above, there were no changes in our internal control over financial reporting that occurred during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our board of directors has determined that Johan De Lille, Jürgen Ingels and Godelieve Verplancke are "audit committee financial experts" as defined in Item 16A of Form 20-F under the Exchange Act and are independent under Rule 10A-3 under the Exchange Act.

ITEM 16B. CODE OF ETHICS

We have adopted a written code of conduct and ethics that outlines the principles of legal and ethical business conduct under which we do business. The code of conduct and ethics applies to all of our directors, senior management and employees, including our Chief Executive Officer and Chief Financial Officer. We have posted this code of conduct and ethics on our website at www.materialise.com. This website address is included in this annual report as an inactive textual reference only, and the information and other content appearing on our website are not incorporated by reference into this annual report. We have not granted any waivers from any provision of our code of conduct and ethics since its adoption.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

BDO Bedrijfsrevisoren Burg. CVBA was engaged as our independent registered public accounting firm in 2016 and 2015 in connection with our SEC reporting obligations, and as our statutory auditor for Belgian company and tax law purposes in 2016. In 2015, Grant Thornton Bedrijfsrevisoren cvba was our statutory auditor for Belgian company and tax law purposes. The following table sets forth by category of service the total fees for services provided by BDO Bedrijfsrevisoren Burg. CVBA during 2016 and 2015, and Grant Thornton Bedrijfsrevisoren CVBA during 2015.

	For the year ended December 31	
in 000€	**2016**	**2015**
Audit Fees	361	273
Audit-Related Fees	10	15
Tax Fees	—	—
All Other Fees	—	—
Total	**371**	**288**

Audit Fees

Audit fees consist of the aggregate fees billed in connection with the audit of our annual consolidated and statutory financial statements and internal controls, the issuance of comfort letters and interim reviews of our quarterly financial information.

Audit-Related Fees

Audit-related fees are fees for services that are traditionally performed by the independent accountants, including consultations concerning financial accounting and reporting, and employee benefit plan audits, and due diligence on mergers or acquisitions.

Tax Fees

No tax fees were paid to BDO Bedrijfsrevisoren Burg. CVBA for the fiscal years ended December 31, 2016 and December 31, 2015.

All Other Fees

No other fees were paid to BDO Bedrijfsrevisoren Burg. CVBA for the fiscal years ended December 31, 2016 and December 31, 2015.

Audit Committee Pre-Approval Policies and Procedures

The pre-approval of the Audit Committee or member thereof, to whom pre-approval authority has been delegated, is required for the engagement of our independent auditors to render audit or non-audit services. Audit Committee pre-approval of audit and non-audit services will not be required if the engagement for the services is entered into pursuant to pre-approval policies and procedures established by our audit committee regarding our engagement of the independent auditors, provided the policies and procedures are detailed as to the particular service, our audit committee is informed of each service provided and such policies and procedures do not include delegation of the Audit Committee's responsibilities under the Exchange Act to our management. Audit Committee pre-approval of non-audit services (other than review and attest services) also will not be required if such services fall within available exceptions established by the SEC.

All audit related fees for the fiscal years ended December 31, 2016 and 2015 were pre-approved under the pre-approval policies of the Audit Committee.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

None.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

None.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

None.

ITEM 16G. CORPORATE GOVERNANCE

The Listing Rules of the NASDAQ Stock Market include certain accommodations in the corporate governance requirements that allow foreign private issuers, such as us, to follow "home country" corporate governance practices in lieu of the otherwise applicable corporate governance standards of the NASDAQ Stock Market. The application of such exceptions requires that we disclose each noncompliance with the NASDAQ Stock Market Listing Rules that we do not follow and describe the Belgian corporate governance practices we do follow in lieu of the relevant NASDAQ Stock Market corporate governance standard. We follow Belgian corporate governance practices in lieu of the corporate governance requirements of the NASDAQ Stock Market in respect of the following:

- **Quorum at Shareholder Meetings**. NASDAQ Stock Market Listing Rule 5620(c) requires that for any meeting of shareholders, the quorum must be no less than 33 1/3% of the outstanding ordinary shares. There is no quorum requirement under Belgian law for our shareholders' meetings, except as provided for by law in relation to decisions regarding certain matters.
- **Independent Director Majority on Board/Meetings**. NASDAQ Stock Market Listing Rules 5605(b)(1) and (2) require that a majority of the board of directors must be comprised of independent directors and that independent directors must have regularly scheduled meetings at which only independent directors are present. We are not required under Belgian law to have any independent directors on our board of directors. However, our articles of association provide that our board of directors must be comprised of at least seven and no more than 11 directors, of which at least three directors must be independent directors under Belgian law. We do not intend to require our independent directors to meet separately from the full board of directors on a regular basis or at all although the board of directors is supportive of its independent members voluntarily arranging to meet separately from the other members of our board of directors when and if they wish to do so.
- **Director Nominations/Remuneration and Nomination Committee Composition**. NASDAQ Stock Market Listing Rule 5605(d)(2) requires that compensation of officers must be determined by, or recommended to, the board of directors for determination, either by a majority of the independent directors, or a compensation committee comprised solely of independent directors. NASDAQ Stock Market Listing Rule 5605(e) requires that director nominees be selected, or recommended for selection, either by a majority of the independent directors or a nominations committee comprised solely of independent directors. Under Belgian law, we are not subject to any such requirements. In particular, we are not required by Belgian law to set up any compensation or nominations committees within our board of directors, and are therefore not subject to any Belgian legal requirements as to the composition of such committees either. However, our articles of association provide that our board of directors may form committees from among its members. See "Item 16. Directors, Senior Management and Employees—C. Board of Directors Practices — Board of Directors Practices." Our board of directors has set up and appointed a Remuneration and Nomination Committee. Our Remuneration and Nomination Committee is currently comprised of three directors, one of whom is independent. In addition, as long as the Family Shareholders control, directly or indirectly, in the aggregate at least 20% of the voting rights attached to our ordinary shares, a majority of our directors must be appointed by our shareholders from a list of candidates proposed by the Family Shareholders.
- **Shareholder Approval of Equity Compensation Plans**. NASDAQ Stock Market Listing Rule 5635(c) requires shareholder approval prior to the issuance of securities in connection with equity-based compensation of officers, directors, employees or consultants. On December 18, 2015, our board of directors adopted a stock option plan, the 2015 Warrant Plan. Warrants under the 2015 Warrant Plan may be offered upon decision by our board of directors (or its proxy holder(s)) to employees, consultants and directors of our company and our subsidiaries. In lieu of the NASDAQ Stock Market Listing Rule 5635(c), we followed Belgian law regarding the issuance of shares or securities in connection with the remuneration of the directors and/or the employees of a Belgian company.

Under Belgian company law, a Belgian company may issue shares or grant rights to acquire shares pursuant to a resolution of the general meeting of shareholders or, within certain limits, pursuant to a resolution of the board of directors if so authorized by the shareholders' meeting (the so-called authorized capital). By resolution of our extraordinary shareholders' meeting of April 23, 2014, which entered into force on June 30, 2014, our shareholders authorized our board of directors, for a period of five years from August 18, 2014, to increase our share capital, in one or more transactions (including through the issuance of warrants), up to a maximum amount of €2,714,634.83 (of which €2,710,008.33 remained available prior to the issuance of the warrants under the 2015 Warrant Plan). On December 18, 2015, our board of directors decided, in connection with the adoption of the 2015 Warrant Plan, to increase the share capital with a maximum amount of €80,738 (excluding any issue premium), subject to the exercise of the warrants issued under the 2015 Warrant Plan.

Pursuant to Belgian company law and the authorization granted by the shareholders' meeting of April 23, 2014, our board of directors is also authorized to issue shares or grant rights to acquire shares in the framework of incentive plans, such as warrant plans or other plans, for the benefit of directors, consultants and members of personnel of our company and of our subsidiaries. As an exception to the foregoing, Belgian company law provides that warrants that are mainly reserved to one or more determined persons other than members of personnel cannot be issued by the board of directors under the authorized capital, but requires specific approval by the shareholders' meeting. However, given that the warrants under the 2015 Warrant Plan will not be mainly reserved to one or more determined persons other than members of personnel, these warrants do not fall within this exception and our board of directors was therefore authorized to issue such warrants without seeking any additional shareholder approval.

The 2015 Warrant Plan provides the terms and conditions governing the procedures for the granting of the warrants to employees, consultants and directors of our Company and of our subsidiaries. These terms and conditions include, among others, the determination of the exercise price and the vesting period. The granting of the warrants, and the determination of the applicable terms and conditions, is entrusted to our board of directors or to one or more proxy holders designated by our board of directors.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

PART III

ITEM 17. FINANCIAL STATEMENTS

Not applicable.

ITEM 18. FINANCIAL STATEMENTS

See our consolidated financial statements beginning on page F-1 of this annual report.

ITEM 19. EXHIBITS

1.1	Articles of Association of Materialise NV (English translation) (incorporated by reference to Exhibit 1.1 to the Company's Annual Report on Form 20-F for the year ended December 31, 2015)
2.1	Deposit Agreement, dated as of June 24, 2014, among Materialise NV and The Bank of New York Mellon (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form F-1 (File No. 333-194982))
2.2	Form of American Depositary Receipt (included in Exhibit 2.1)
	Certain instruments relating to long-term debt as to which the total amount of securities authorized thereunder does not exceed 10% of the total assets of Materialise NV and its subsidiaries on a consolidated basis have been omitted in accordance with Form 20-F. The Company hereby agrees to furnish a copy of any such instrument to the SEC upon request.
4.1	2007 Warrant Plan (English translation) (incorporated by reference to Exhibit 10.1 to the Company's Registration Statement on Form F-1 (No. 333-194982))
4.2	2013 Warrant Plan (English translation) (incorporated by reference to Exhibit 10.2 to the Company's Registration Statement on Form F-1 (No. 333-194982))
4.3	2014 Warrant Plan (English translation) (incorporated by reference to Exhibit 10.3 to the Company's Registration Statement on Form F-1 (No. 333-194982))
4.4	Form of Warrant Agreement under 2014 Warrant Plan (English translation) (incorporated by reference to Exhibit 4.6 to the Company's Registration Statement on Form S-8 (No. 333-197236))
4.5	2015 Warrant Plan (English translation) (incorporated by reference to Exhibit 4.5 to the Company's Annual Report on Form 20-F for the year ended December 31, 2015)
4.6	Form of Warrant Agreement under 2015 Warrant Plan (English translation) (incorporated by reference to Exhibit 4.4 to the Company's Registration Statement on Form S-8 (File No. 333-212445))
4.7	Lease, dated September 30, 2002, between Ailanthus NV and Materialise NV (English translation) (incorporated by reference to Exhibit 10.5 to the Company's Registration Statement on Form F-1 (No. 333-194982))
4.8	Registration Rights Agreement, dated September 15, 2016, among Materialise NV and the Holders party thereto (incorporated by reference to Exhibit 4.8 to the Company's Registration Statement on Form F-3 (No. 333-213649))
8.1	Subsidiaries of Materialise NV
12.1	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
12.2	Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
13.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
23.1	Consent of BDO Bedrijfsrevisoren Burg. CVBA, independent registered public accounting firm

Signatures

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

MATERIALISE NV

By: /s/ Wilfried Vancraen
Name: Wilfried Vancraen
Title: Chief Executive Officer

Date: April 28, 2017

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Consolidated Financial Statements for the Years Ended December 31, 2016, 2015 and 2014

Report of Independent Registered Public Accounting Firm

Board of Directors and Shareholders
Materialise NV
Leuven, Belgium

We have audited the accompanying consolidated statements of financial position of Materialise NV as of December 31, 2016, December 31, 2015 and December 31, 2014 and the related consolidated income statements, statements of comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing 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 over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Materialise NV at December 31, 2016, December 31, 2015 and December 31, 2014, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

The consolidated financial statements as of December 31, 2015 and 2014 and for each of the two years in the period ended December 31, 2015, have been restated to reflect adjustments relating to current deferred income and non-current deferred income as described in Note 2 to the consolidated financial statements.

Zaventem, Belgium

April 28, 2017

BDO Bedrijfsrevisoren Burg. CVBA

Represented by

Bert Kegels

/s/ Bert Kegels

Consolidated income statements

(in thousands euros, except per share data)	Notes	For the year ended December 31 2016	2015	2014
Revenue	20.1	114,477	102,035	81,355
Cost of sales	20.2	(46,706)	(42,963)	(32,396)
Gross profit		**67,771**	**59,072**	**48,959**
Research and development expenses	20.3	(17,682)	(18,186)	(15,093)
Sales and marketing expenses	20.4	(36,153)	(36,832)	(27,543)
General and administrative expenses	20.5	(20,041)	(15,045)	(11,645)
Net other operating income / (expenses)	20.6	6,212	7,102	5,652
Operating (loss) profit		**107**	**(3,889)**	**330**
Financial expenses	20.8	(2,437)	(2,470)	(1,150)
Financial income	20.9	2,039	3,511	3,160
Share in loss of joint venture	8	(1,018)	(401)	(81)
(Loss) profit before taxes		**(1,309)**	**(3,249)**	**2,259**
Income taxes	20.10	(1,710)	389	(387)
Net (loss) profit of the year		**(3,019)**	**(2,860)**	**1,872**
Net (loss) profit attributable to:				
The owners of the parent		(3,019)	(2,807)	2,061
Non-controlling interest		—	(53)	(189)
Earnings per share attributable to ordinary owners of the parent				
Basic	21	(0.06)	(0.06)	0.05
Diluted	21	(0.06)	(0.06)	0.05

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated statements of comprehensive income

(in thousands euros)	Notes	For the year ended December 31 2016	2015	2014
Net (loss) profit of the year		**(3,019)**	**(2,860)**	**1,872**
Other comprehensive (loss) income				
Exchange differences on translation of foreign operations *		(1,833)	624	126
Other comprehensive (loss) income, net of taxes		(1,833)	624	126
Total comprehensive (loss) income of the year, net of taxes		**(4,852)**	**(2,236)**	**1,998**
Total comprehensive (loss) income attributable to:				
The owners of the parent		(4,852)	(2,183)	2,187
Non-controlling interest		—	(53)	(189)

* May be reclassified subsequently to profit & loss

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated statements of financial position

(in thousands of euros)	Notes	For the year ended December 31 2016	2015	2014
Assets				
Non-current assets				
Goodwill	5	8,860	9,664	7,714
Intangible assets	6	9,765	9,657	7,727
Property, plant & equipment	7	45,063	38,400	30,212
Investments in joint ventures	8	—	1,018	419
Deferred tax assets	20.10	336	1,092	232
Other non-current assets	9	2,154	356	328
Total non-current assets		**66,178**	**60,187**	**46,632**
Current assets				
Inventories	9	7,870	5,387	3,660
Trade receivables	10	27,479	22,843	18,370
Held to maturity investments	11	—	—	10,000
Other current assets	9	4,481	4,993	3,540
Cash and cash equivalents	11	55,912	50,726	51,019
Total current assets		95,742	83,949	86,589
Total assets		**161,920**	**144,136**	**133,221**

The accompanying notes form an integral part of these consolidated financial statements.

(in thousands of euros)	Notes	For the year ended December 31 2016	2015*	2014*
Equity and liabilities				
Equity				
Share capital	12	2,729	2,729	2,788
Share premium	12	79,019	78,098	76,650
Consolidated reserves	12	(1,603)	1,407	5,764
Other comprehensive income		(1,112)	721	97
Equity attributable to the owners of the parent		79,033	82,955	85,299
Non-controlling interest	12	—	—	(132)
Total equity		**79,033**	**82,955**	**85,167**
Non-current liabilities				
Loans & borrowings	14	28,267	16,607	11,848
Deferred tax liabilities	20.10	1,325	2,068	1,329
Deferred income	16	3,588	1,905	1,970
Other non-current liabilities	15	1,873	2,244	969
Total non-current liabilities		**35,053**	**22,824**	**16,116**
Current liabilities				
Loans & borrowings	14	5,539	4,482	5,499
Trade payables		13,400	9,712	7,205
Tax payables		926	255	128
Deferred income	16	17,822	14,696	10,449
Other current liabilities	17	10,147	9,212	8,657
Total current liabilities		**47,834**	**38,357**	**31,938**
Total equity and liabilities		**161,920**	**144,136**	**133,221**

* The years 2015 and 2014 have been restated to reflect the reclassification of the long-term deferred income. See note 2 for more information.

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated statements of changes in equity

(In thousands of euros)	Notes	Attributable to the owners of the parents						
		Share capital	Share premium	Reserves	Other compre-hensive income	Total	Non-controlling interest	Total equity
At 1 January, 2016		**2,729**	**78,098**	**1,407**	**721**	**82,955**	**—**	**82,955**
Net loss		—	—	(3,019)	—	(3,019)	—	(3,019)
Other comprehensive loss		—	—	—	(1,833)	(1,833)	—	(1,833)
Total comprehensive income (loss)		**—**	**—**	**(3,019)**	**(1,833)**	**(4,852)**	**—**	**(4,852)**
Equity-settled share-based payment expense	13	—	921	9	—	930	—	930
At 31 December, 2016		**2,729**	**79,019**	**(1,603)**	**(1,112)**	**79,033**	**—**	**79,033**

The accompanying notes form an integral part of these condensed interim consolidated financial statements.

(In thousands of euros)	Notes	Attributable to the owners of the parents: Share capital	Share premium	Reserves	Other comprehensive income	Total	Non-controlling interest	Total equity
At 1 January, 2015		**2,788**	**76,650**	**5,764**	**97**	**85,299**	**(132)**	**85,167**
Net loss		—	—	(2,807)	—	(2,807)	(53)	(2,860)
Other comprehensive income		—	—	—	624	**624**	—	**624**
Total comprehensive income (loss)		**—**	**—**	**(2,807)**	**624**	**(2,183)**	**(53)**	**(2,236)**
Transfer share capital to share premium - correction	12	(69)	69	—	—	—	—	—
Capital increase in cash	12	5	575	—	—	580	—	580
Capital increase through exercise of warrants	12	5	90	—	—	95	—	95
Acquisition NCI Mobelife	12	—	—	(1,562)	—	(1,562)	185	(1,377)
Equity-settled share-based payment expense	13	—	714	12	—	726	—	726
At 31 December, 2015		**2,729**	**78,098**	**1,407**	**721**	**82,955**	**—**	**82,955**

The accompanying notes form an integral part of these condensed interim consolidated financial statements.

(In thousands of euros)	Notes	Attributable to the owners of the parents					Non-controlling interest	Total equity
		Share capital	Share premium	Reserves	Other compre-hensive income	Total		
At 1 January, 2014		**2,235**	**12,321**	**3,198**	**(29)**	**17,725**	**10**	**17,735**
Net profit		—	—	2,061	—	2,061	(189)	1,872
Other comprehensive income		—	—	—	126	126	—	126
Total comprehensive income (loss)		**—**	**—**	**2,061**	**126**	**2,187**	**(189)**	**1,998**
Equity-settled share-based payment expense	13	—	604	11	—	615	—	615
Capital increase initial public offering	12	480	70,004	—	—	70,484	—	70,484
IPO Transaction costs	12	—	(6,279)	—	—	(6,279)	—	(6,279)
Capital increase Rapidfit+	12	—	—	750	—	750	—	750
Written put option on NCI	12	—	—	(273)	—	(273)	—	(273)
Payment Uncalled capital Mobelife	12	—	—	(7)	—	(7)	40	33
Capital increase Mobelife through exercise of warrants	13	—	—	24	—	24	7	31
Capital increase through exercise of warrants	13	73	—	—	—	73	—	73
At 31 December, 2014		**2,788**	**76,650**	**5,764**	**97**	**85,299**	**(132)**	**85,167**

The accompanying notes form an integral part of these condensed interim consolidated financial statements.

Consolidated cash flow statements

in 000€	Notes	For the year ended December 31 2016	2015	2014
Operating activities				
Net (loss) profit of the year		(3,019)	(2,860)	1,872
Non-cash and operational adjustments				
Depreciation of property, plant & equipment	7	6,420	5,122	3,498
Amortization of intangible assets	6	1,954	1,585	1,067
Impairment of goodwill	5	—	104	—
Share-based payment expense	13	977	769	675
Loss (gain) on disposal of property, plant & equipment	7	(149)	(62)	23
Government grants		—	—	(8)
Movement in provisions		18	(116)	—
Movement reserve for bad debt	10	77	254	361
Financial income	20.9	(172)	(413)	(260)
Financial expense	20.8	983	901	1,031
Impact of foreign currencies		(400)	(1,530)	(2,781)
Share in loss of a joint venture (equity method)	8	1,018	401	81
Deferred tax expense (income)	20.10	374	(761)	73
Income taxes	20.10	1,338	373	314
Fair value adjustment contingent consideration	4	(455)	—	—
Other		(78)	—	23
Working capital adjustment & income tax paid		—	—	—
Increase in trade receivables and other receivables		(6,465)	(6,645)	(5,749)
Decrease (increase) in inventories		(2,482)	(1,671)	(311)
Increase in trade payables and other payables		9,086	7,148	5,177
Income tax paid		(530)	(246)	(247)
Net cash flow from operating activities		**8,495**	**2,353**	**4,839**

The accompanying notes form an integral part of these consolidated financial statements.

in 000€	Notes	For the year ended December 31 2016	2015	2014
Investing activities				
Purchase of property, plant & equipment	7	(12,237)	(8,907)	(9,581)
Purchase of intangible assets	6	(2,342)	(1,641)	(923)
Proceeds from the sale of property, plant & equipment (net)	7	1,928	338	103
Acquisition of subsidiary	4	—	(1,619)	(10,364)
Investments in joint-ventures	8	—	(1,000)	(500)
Investments in investments held to maturity	11	—	10,000	(10,000)
Interest received		11	35	20
Net cash flow used in investing activities		**(12,640)**	**(2,794)**	**(31,245)**
Financing activities				
Proceeds from loans & borrowings and convertible debt	14	14,669	5,672	3,299
Repayment of loans & borrowings	14	(2,796)	(4,711)	(3,914)
Repayment of finance leases	14	(1,898)	(1,546)	(1,403)
Proceeds from the exercise of warrants	13	—	95	73
Capital increase in subsidiary by non-controlling interest		—	—	781
Purchase of non-controlling interest	12	—	(1,377)	—
Contribution unpaid capital non-controlling interest		—	—	35
Capital increase in parent company	12	—	580	70,484
Direct attributable expense capital increase	12	—	—	(6,279)
Interest paid		(630)	(589)	(606)
Other financial income (expense)		(79)	88	(413)
Net cash flow from (used in) financing activities		**9,266**	**(1,788)**	**62,057**
Net increase of cash & cash equivalents		**5,121**	**(2,229)**	**35,651**
Cash & cash equivalents at beginning of the year	11	50,726	51,019	12,598
Exchange rate differences on cash & cash equivalents		65	1,936	2,770
Cash & cash equivalents at end of the year	11	55,912	50,726	51,019

The accompanying notes form an integral part of these consolidated financial statements.

Notes to the consolidated financial statements

1 Corporate information

Materialise NV is a limited liability company with its registered office at Technologielaan 15, 3001 Leuven, Belgium. The consolidated financial statements comprise Materialise NV (the "Company" or "Parent") and its subsidiaries (collectively, the "Group"). See Note 26 for a list of subsidiaries of the Company.

The Group is a leading provider of additive manufacturing (AM) software and of sophisticated 3D printing services. The products and services of the Group are organized in the three segments: Materialise Medical, Materialise Software and Materialise Manufacturing. The Group sells its products in Europe, Americas and Asia.

The consolidated financial statements of the Group for the year ended December 31, 2016 were approved and authorized for issue on April 28, 2017 in accordance with a resolution of the Parent's Board of Directors.

2 Basis of preparation

The consolidated financial statements of the Group for the three years ended December 31, 2016 were prepared in accordance with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) (collectively "IFRS") and with International Financial Reporting Standards (IFRS) as adopted by the European Union ("EU-IFRS").

These consolidated financial statements have been prepared on a historical cost basis, except for the assets and liabilities that have been acquired as part of a business combination which have been initially recognized at fair value and certain financial instruments which are measured at fair value.

The consolidated financial statements are presented in thousands of euros (K€ or thousands of €) and all "currency" values are rounded to the nearest thousand (€000), except when otherwise indicated.

The preparation of financial statements in compliance with adopted IFRS requires the use of certain critical accounting estimates. It also requires Group management to exercise judgment in applying the Group's accounting policies. The areas where significant judgment and estimates have been made in preparing the financial statements and their effect are disclosed in Note 3.

New standards, interpretations and amendments adopted by the Group

The Group has adopted the following new and revised standards and interpretations issued by the IASB and IFRIC that are relevant to its operations and effective for accounting periods beginning on January 1, 2016.

- Amendments to IAS 16 and IAS 38 – Clarification of Acceptable Methods of Depreciations and Amortization, effective for annual periods beginning on January 1, 2016.
- Amendments to IFRS 11 – Accounting for Acquisition of Interests in Joint Operations, effective for annual periods beginning on January 1, 2016.
- Annual Improvements to IFRS 2012-2014 Cycle, effective for annual periods beginning on January 1, 2016.
- Amendments to IFRS 10, IFRS 12 and IAS 28 – Investment Entities: Applying the Consolidation Exception, effective for annual periods beginning on January 1, 2016.
- Amendments to IAS 1 – Disclosure Initiative, effective for annual periods beginning on January 1, 2016.

The application of the above new standards and interpretations did not have a significant impact on the financial position and the results of the Group.

Classification error

Through September 30, 2016, the Group presented all deferred income associated with maintenance and license contracts and project contracts as a current liability while a portion of such deferred income relates to contractual periods that are more than 12 months after the reporting date and therefore such portion should have been presented as non-current. The Group has an increasing volume of software and project contracts with a contractual term of more than 12 months.

For the financial reporting year ended December 31, 2016, the Group is presenting portions of its deferred income associated with such contracts as current and non-current liabilities. This presentation has been applied retroactively for the financial reporting year ended December 31, 2015 and 2014.

The impact on the statement of financial position is as follows:

	For the year ended December 31	
in 000€	**2015**	**2014**
Deferred income - current - prior to change	16,509	11,652
Deferred income - current - restated	**14,696**	**10,449**
Reclassified non-current deferred maintenance revenue	**1,813**	**1,203**
Deferred income - non-current - prior to change	92	767
Deferred income - non-current - restated	**1,905**	**1,970**

3 Summary of significant accounting policies

Basis for consolidation

The consolidated financial statements comprise the financial statements of the Group and its subsidiaries.

Entities are fully consolidated from the date of acquisition, which is the date when the Group obtains control, and continue to be consolidated until the date when such control ceases. The financial statements of the entities are prepared for the same reporting period as the parent company, using consistent accounting policies. All intra-Group balances, transactions, unrealized gains and losses resulting from intra-Group transactions and dividends are fully eliminated.

The Group attributes profit or loss and each component of other comprehensive income to the owners of the parent company and to the non-controlling interest based on present ownership interests, even if the results in the non-controlling interest have a negative balance.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction. If the Group loses control over the subsidiary, it will derecognize the assets (including goodwill) and liabilities of the subsidiary, any non-controlling interest and the other components of equity related to the subsidiary. Any surplus or deficit arising from the loss of control is recognized in profit or loss. If the Group retains an interest in the previous subsidiary, then such interest is measured at fair value at the date the control is lost.

The proportion allocated to the parent and non-controlling interests in preparing the consolidated financial statements is determined based solely on present ownership interests.

The following changes to the consolidation scope occurred in 2016:

- Liquidation of the subsidiary Rapit Fit Holding Inc on February 17, 2016;
- Merger of the subsidiary Cenat BVBA with Materialise NV on June 29, 2016;
- Incorporation of the subsidiary Materialise S.R.L. (Italy) on July 29, 2016;
- Incorporation of the subsidiary Materialise Australia PTY Ltd on September 30, 2016;
- Merger of the subsidiary Elbimmo NV with Materialise NV on November 7, 2016;
- Liquidation of the subsidiary Materialise Metal BVBA on December 5, 2016;
- Liquidation of the subsidiary Mobelife NV on December 5, 2016;

Non-controlling interests

The Group has the choice, on a transaction by transaction basis, to initially recognize any non-controlling interest in the acquiree which is a present ownership interest and entitles its holders to a proportionate share of the entity's net assets in the event of liquidation at either acquisition date fair value or, at the present ownership instruments' proportionate share in the recognized amounts of the acquiree's identifiable net assets. Other components of non-controlling interest such as outstanding share options are generally measured at fair value. The Group has not elected to take the option to use fair value in acquisitions completed to date and currently does not have non-controlling interest resulting from business combinations.

Foreign currency translation

The Group's consolidated financial statements are presented in euros, which is also the parent company's functional currency. For each entity, the Group determines the functional currency, and items included in the financial statements of each entity are measured using the functional currency.

Financial statements of foreign subsidiaries

Foreign subsidiaries use the local currencies of the country where they operate. The statement of financial position is translated into euro at the closing rate on the reporting date and their income statement is translated at the average exchange rate at each month-end. Differences resulting from the translation of the financial statements of said subsidiaries are recognized in other comprehensive income as "exchange differences on translation of foreign operations".

Foreign currency transactions

Transactions denominated in foreign currencies are translated into euro at the exchange rate at the end of the previous month-end. Monetary items in the statement of financial position are translated at the closing rate at each reporting date and the relevant translation adjustments are recognized in financial or operating result depending on its nature.

Business combinations and goodwill

Business combinations are accounted for using the acquisition method at the acquisition date, which is the date at which the Group obtains control over the entity. The cost of an acquisition is measured as the amount of the consideration transferred to the seller, measured at the acquisition date fair value, and the amount of any non-controlling interest in the acquiree.

The Group measures goodwill initially at cost at the acquisition date, being:

- the fair value of the consideration transferred to the seller, plus
- the amount of any non-controlling interest in the acquiree, plus
- if the business combination is achieved in stages, the fair value of the existing equity interest in the acquiree re-measured at the acquisition date, less
- the fair value of the net identifiable assets acquired and assumed liabilities

Goodwill is recognized as an intangible asset with any impairment in carrying value being charged to the consolidated income statement. Where the fair value of identifiable assets, liabilities and contingent liabilities exceed the fair value of consideration paid, the excess is credited in full to the consolidated income statement on acquisition date.

Acquisition costs incurred are expensed and included in general and administrative expenses.

Any contingent consideration to be transferred by the acquirer will be recognized at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration, which is deemed to be an asset or liability, will be recognized either as a profit or loss or as a change to other comprehensive income. If the contingent consideration is classified as equity, it should not be re-measured until it is finally settled within equity.

Acquisition of non-controlling interests are accounted for as an equity transaction.

Investments in joint ventures

The Group carries investment in a joint venture (RS Print NV). The Group's investments in its joint venture is accounted for using the equity method. Under the equity method, the investment in the joint venture was initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the joint venture since the acquisition date. Goodwill relating to the joint venture is included in the carrying amount of the investment and is not tested for impairment individually.

The income statement reflects the Group's share of the results of operations of the joint venture. Any change in other comprehensive income of the joint venture is presented as part of the Group's other comprehensive income. In addition, when there has been a change recognized directly in the equity of the joint venture, the Group recognizes its share of the change in the statement of changes in equity. Unrealized gains and losses resulting from transactions between the Group and the joint venture are eliminated to the extent of the interest in the joint venture.

After application of the equity method, the Group determines whether it is necessary to recognize an impairment loss on its investment in its joint venture. At each reporting date, the Group determines whether there is objective evidence that the investment in the joint venture is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the Group's interest in the joint venture (higher of value in use and fair value less costs to sell), and then recognizes the loss as 'Share of profit or loss of joint ventures' in the income statement.

Property, plant and equipment

Property, plant and equipment is stated at cost, net of accumulated depreciation and/or accumulated impairment losses, if any. Such cost includes borrowing costs directly attributable to construction projects if the asset necessarily takes a substantial period of time to get ready for its intended use, it is probable that they will result in future economic benefits to the group and the cost can be measured reliably. When significant parts of property, plant and equipment are required to be replaced at intervals, the Group recognizes such parts as individual assets with specific useful lives and depreciates them accordingly. Likewise, when a major inspection is performed, its cost is recognized in the carrying amount of the property, plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in the income statement as incurred.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets as follows:

• Buildings:	20-30 years
• Furniture, Plant & Equipment	3-15 years
• Property leased Assets -	20-30 years or lease term if shorter
• Leased machines	5-10 years or lease term if shorter

Land is not depreciated.

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset or the lease term.

An item of property, plant and equipment and any significant part initially recognized is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the income statement when the asset is derecognized.

The assets' residual values, useful lives and methods of depreciation are reviewed at each financial year-end and adjusted prospectively, if appropriate.

Leases

The determination of whether an arrangement is, or contains, a lease is based on the substance of the arrangement at the inception date, whether fulfillment of the arrangement is dependent on the use of a specific asset or assets or the arrangement conveys a right to use the asset, even if that right is not explicitly specified in an arrangement.

Finance leases which transfer to the Group substantially all the risks and benefits incidental to ownership of the leased item, are capitalized at the commencement of the lease at the fair value of the leased item or, if lower, at the present value of the minimum lease payments. Lease payments are apportioned between finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability.

Finance charges are recognized as financial expenses in the consolidated income statement.

Where substantially all of the risks and rewards incidental to ownership are not transferred to the Group (an "operating lease"), the total rentals payable under the lease are charged to the consolidated income statement on a straight-line basis over the lease term. The aggregate benefit of lease incentives is recognized as a reduction of the rental expense over the lease term on a straight-line basis.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of a qualified asset that necessarily takes a substantial period of time to prepare for its intended use or sale are capitalized as part of the cost of the respective assets. All other borrowing costs are expensed in the period they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

Research and development

Research and development includes the costs incurred by activities related to the development of software solutions (new products, updates and enhancements), guides and other products.

Development activities involve the application of research findings or other knowledge to a plan or a design of new or substantially improved (software) products before the start of the commercial use.

Development expenditures on an individual project are recognized as an intangible asset when the Group can demonstrate:

- the technical feasibility of completing the intangible asset so that the asset will be available for use or sale;
- its intention to complete and its ability to use or sell the asset;
- how the asset will generate future economic benefits;
- the availability of resources to complete the asset;
- the ability to measure reliably the expenditure during development.

The Group has determined that the conditions for recognizing internally generated intangible assets from proprietary software, guide and other product development activities are not met until shortly before the products are available for sale, unless the development is done based upon specific request of the customer and subject to an agreement. As such, development expenditures not satisfying the above criteria and expenditures on the research phase of internal projects are recognized in the consolidated income statement as incurred.

Intangible assets other than goodwill

Intangible assets comprise acquired technology and customer portfolio, patents and licenses, goodwill and technology and customers acquired in connection with business combinations. Those intangible assets are measured on initial recognition at cost, except for the acquired technology and customers arising from business combinations, which are measured initially at fair value. Following initial recognition, intangible assets other than goodwill are carried at cost less any accumulated amortization and accumulated impairment losses, if any.

The useful life of the intangible assets is as follows:

- Software: 3 years;
- Patents and licenses: 5 years;
- Acquired customers: 5-10 years;
- Technology: 6-10 years.

The intangible assets with finite lives are amortized over their useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at the end of each reporting period. The amortization expense on intangible assets with finite lives is recognized in the consolidated income statement based on its function which may be “cost of sales”, “sale & marketing expenses”, “research & development expenses” and “general and administrative expenses”.

Impairment of goodwill and other non-financial assets (excluding inventories and deferred tax assets)

Impairment tests on goodwill and other intangible assets with indefinite useful economic lives are undertaken annually at the financial year end. Other non-financial assets are subject to impairment tests whenever events or changes in circumstances indicate that their carrying amount may not be recoverable. Where the carrying value of an asset exceeds its recoverable amount (i.e. the higher of value in use and fair value less costs to sell), the asset is written down accordingly.

Where it is not possible to estimate the recoverable amount of an individual asset, the impairment test is carried out on the smallest Group of assets to which it belongs for which there are separately identifiable cash flows; its cash generating units (‘CGUs’). Goodwill is allocated on initial recognition to each of the Group’s CGUs that are expected to benefit from the synergies of the combination giving rise to the goodwill.

The Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to future cash flows projected after the fifth year.

Impairment charges are included in profit or loss, except, where applicable, to the extent they reverse gains previously recognized in other comprehensive income. An impairment loss recognized for goodwill is not reversed.

Where goodwill forms part of a cash-generating unit and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation. Goodwill disposed of in this circumstance is measured based on the relative values of the operation disposed of and the portion of the cash-generating unit retained.

Inventories

Inventories are valued at the lower of cost and net realizable value.

Costs incurred in bringing each product to its present location and condition are accounted for as follows:

- Raw materials: purchase cost on a first in, first out basis; and
- Finished goods and work in progress: cost of direct materials and labor and a proportion of manufacturing overheads based on the normal operating capacity, but excluding borrowing costs

Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

A write-off of inventories is estimated based on an ageing or rotation analysis.

Financial assets

Financial assets include loans, deposits, receivables and held-to-maturity investments measured at amortized cost. The Group currently does not have available for sale financial investments.

Financial assets measured at amortized cost

The Group has loans and receivables and held-to-maturity investments that are measured at amortized cost.

The Group's loans and receivables comprise trade and other receivables and cash and cash equivalents in the consolidated statement of financial position.

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 – for the purpose of the statement of cash flows – bank overdrafts. Bank overdrafts are shown within loans and borrowings in current liabilities on the consolidated statement of financial position.

The Group has held-to-maturity investments only during 2014. Non-derivative financial assets with fixed or determinable payments and fixed maturities are classified as held to maturity when the Group has the positive intention and ability to hold them to maturity.

Financial assets that are classified as loans and receivables and held-to-maturity are initially measured at fair value plus transaction costs and subsequently at amortized cost using the effective interest rate method (EIR). Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included under financial income in the consolidated income statement. The losses arising from impairment are recognized in the consolidated income statement under other operating expenses or financial expenses.

Financial assets measured at fair value

The Group does not currently have financial assets classified as financial assets at fair value through profit or loss except for a call option on non-controlling interests in Rapidfit+ as disclosed in Note 12.

Impairment of financial assets

The group assesses at each reporting date whether there is any objective evidence that a financial asset or a group of financial assets is impaired. A financial asset or a group of financial assets is to be impaired if there is objective evidence of impairment as a result of one or more events that has occurred after the initial recognition of the asset (an incurred 'loss event') and that loss event has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated.

If there is objective evidence that an impairment loss has been incurred, 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 expected credit losses that have not yet been incurred). The present value of the estimated future cash flows is discounted at the financial asset's original effective interest rate. If a loan has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate.

The carrying amount of the asset is reduced through the use of an allowance account and the amount of loss is recognized in the income statement.

Financial liabilities

The Group has financial liabilities measured at amortized cost which include loans and borrowings, trade payables and other payables and financial liabilities resulting from written put options on non-controlling interests. The Group currently does not have financial liabilities held for trading.

Financial liabilities at amortized cost

Those financial liabilities are recognized initially at fair value plus directly attributable transaction costs and are measured at amortized cost using the effective interest rate method. Gains and losses are recognized in the income statement when the liabilities are derecognized as well as through the effective interest rate method amortization process.

Written put options on non-controlling interest

The Group recognizes a financial liability for the written put options on non-controlling interest. The written put options have a variable redemption price based on a formula as specified in the contract (see Note 12).

- The financial liability is initially recognized at fair value and the fair value is reclassified from non-controlling interest and, for any amount higher than the non-controlling interest, from consolidated reserves.
- The fair value is determined as the present value of the redemption amount.
- Any change in the fair value as a result of a change in the estimated redemption price is recognized directly in consolidated reserves. Any unwinding effect of the present value of the redemption price is recognized directly in profit and loss (financial cost).
- No share of profit is allocated to the non-controlling interest.
- Upon exercise of the written put option, the carrying value will be reclassified to consolidated reserves. When the written put option is not exercised, the carrying value of the financial liability is derecognized against consolidated reserves.

Compound financial instruments

The Group has issued convertible debt which is accounted for as a compound financial instrument. For those instruments, the Group determines the carrying amount of the liability component by measuring the fair value of a similar liability (including any embedded non-equity derivative features) that does not have an associated equity component. The carrying amount of the equity instrument is then determined by deducting the fair value of the financial liability from the fair value of the compound financial instrument as a whole.

Derecognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires.

Offsetting

Financial assets and financial liabilities are offset and the net amount is reported in the consolidated statement of financial position if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

Share capital

Financial instruments issued by the Group are classified as equity only to the extent that they do not meet the definition of a financial liability or financial asset. The Group's ordinary shares are classified as equity instruments.

Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Pensions benefits

The Group has a defined contribution obligation where the Group pays contributions based on salaries to an insurance company, in accordance with the laws and agreements in each country.

The Belgian defined contribution pension plans are by law with variable minimum returns based on the Belgian government bonds, with a minimum of 1.75% and a maximum of 3.75%, effective for contributions paid as from 2016. For contribution paid until 2015, the minimum guaranteed return is 3.25% on employer contributions and 3.75% on employee contributions.

These plans qualify as defined benefit plans. However for the years 2015 and before, when taken into account the historical discussions on how to account for these specific type of plans where the contributions paid are subject to a minimum guaranteed return at the level of IFRIC, the Company believes the application of the projected unit credit method to these plans is troublesome and will not provide a faithful representation of the liability with respect to these promises. The Group has adopted a retrospective approach whereby the net liability recognized in the statement of financial position is based on the sum of the positive differences, determined by individual plan participant, between the minimum guaranteed reserves and the benefits accrued at the closing date based on the actual rates of return.

Contributions are recognized as expenses for the period in which employees perform the corresponding services. Outstanding payments at the end of the period are shown as other current liabilities.

As from 2016, those plans are accounted for as a defined benefit plan however are considered not material.

Share based payments

Directors and employees (including senior executives) of the Group receive remuneration in the form of share-based payments, whereby employees render services as consideration for equity instruments (equity-settled transactions). The Group currently has only warrants and share-appreciation rights as share-based payments.

Equity-settled transactions

Equity-settled share-based payments to employees and others providing similar services are measured, indirectly, at the fair value of the equity instruments granted. The cost of equity-settled transactions is recognized, together with a corresponding increase in other capital reserves in equity, over the period in which the performance and/or service conditions are fulfilled. The cumulative expense recognized for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Group's best estimate of the number of equity instruments that will ultimately vest. The income statement expense or credit for a period represents the movement in cumulative expense recognized at the beginning and end of that period and is recognized as employee benefits expense.

The Group does currently only have equity-settled share-based payments that have service-based vesting conditions and no instruments with market vesting conditions.

No expense is recognized for awards that do not ultimately vest.

When the terms of an equity-settled award are modified, the minimum expense recognized is the expense as if the terms had not been modified, if the original terms of the award are met. An additional expense is recognized for any modification that increases the total fair value of the share-based payment transaction, or is otherwise beneficial to the employee as measured at the date of modification.

When an equity-settled award is cancelled, it is treated as if it vested on the date of cancellation, and any expense not yet recognized for the award is recognized immediately. This includes any award where non-vesting conditions within the control of either the entity or the employee are not met. However, if a new award is substituted for the cancelled award, and designated as a replacement award on the date that it is granted, the cancelled and new awards are treated as if they were a modification of the original award, as described in the previous paragraph.

Cash-settled transactions

The Group has cash-settled share-based payment transaction for certain employees in certain countries due to legal requirements (in the form of share-appreciation rights). The cost of cash-settled transactions is measured initially at fair value at the grant date. This fair value is expensed over the period until the vesting date with recognition of a corresponding liability. The liability is remeasured to fair value at each reporting date up to, and including the settlement date, with changes in fair value recognized in employee benefits expense.

Revenue recognition

The Group's revenue, which is presented net of sales taxes, is primarily generated by the sale of our software and 3D printed products and services. Software revenue is comprised of perpetual and periodic licenses, maintenance revenue and software development service fees. Perpetual license holders may opt to take an annual maintenance contract, which leads to annual fees. Periodic licenses entitle the customer to maintenance, support and product updates without additional charge. 3D printed product revenue is derived from our network of 3D printing service centers and may include support and services such as pre-production collaboration prior to printing the product.

The Group sells its products and software through its direct sales force and through authorized distributors.

Software license revenue, maintenance and/or software development service fees may be bundled in one arrangement, or may be sold separately.

The Group recognizes revenue for goods including software when all the significant risks and rewards have been transferred to the customer, no continuing managerial involvement usually associated with ownership of the goods is retained, no effective control over the goods sold is retained, the amount of revenue can be measured reliably, it is probable that the economic benefits associated with the transactions will flow to the entity and the costs incurred or to be incurred in respect of the transaction can be measured reliably.

3D printed products

The Group recognizes revenue on the sale of goods to the customer or distributor upon shipment or delivery taking into account the shipment terms (usually Ex-works or FOB Time of Shipment Incoterms (International Commercial Terms)).

Perpetual licensed software

The sale and/or license of software products is deemed to have occurred when a customer either has taken possession of or has the ability to take immediate possession of the software and the software key.

Perpetual software licenses can include one year maintenance and support services. The Company sells these maintenance services also on a stand-alone basis and is therefore capable of determining their fair value. On this basis, the amount of the embedded maintenance is separated from the fee for the perpetual license and is recognized ratably over the period to which they relate.

Time-based licensed software

The time-based license agreements include the use of a software license for a fixed term and maintenance and support services during the same period. The Company does not sell time-based licenses without maintenance and support services and therefore revenues for the entire arrangements are recognized ratably over the term.

Maintenance and support services

The Group recognizes revenue from maintenance and support services ratably on a straight-line basis over the term that the maintenance service is provided. In general, maintenance services are not automatically renewed.

A maintenance and support contract may include a reinstatement for previous years when the customer did not have a maintenance and support contract previously. Revenue from reinstatements are recognized immediately when the maintenance and support services commence.

Software development services (SDS)

SDS include customized development of software components for customers. The Group recognizes revenue on SDS agreements based either on time and material basis or on the stage of completion of each service contract and when the stage of completion can be measured reliably.

The Company determines the percentage-of-completion by comparing labor hours incurred to-date to the estimated total labor hours required to complete the project. The Company considers labor hours to be the most reliable available measure of progress on these projects. Adjustments to the Company's estimates of the time to completion are made when facts resulting in a change become known. When the estimate indicates that a loss will be incurred, such loss is recognized immediately.

Multiple element arrangements

The Group has entered into a number of multiple element arrangements, such as when selling perpetual licenses that may include maintenance and support (included in price of perpetual licenses) and time-based licenses (that include embedded maintenance and support, both of which may be sold with software development services, training, and other product sales). In some cases, the Group delivers software development services bundled with the sale of the software.

In multiple element arrangements, whether sold to end-customers or to collaboration partners, the Company uses either the stand-alone selling prices or management's best estimate of selling prices to determine the fair value of each separate element within the arrangement, including software and software-related services such as maintenance and support. In general, elements in such arrangements are also sold on a stand-alone basis and stand-alone selling prices are available. Where a selling price does not exist on a stand-alone basis or an estimate cannot be made for such element, as it may not be sold separately, then the remaining fees within the contract are recognized over the contractual period on a straight-line basis.

Revenue is allocated to each deliverable based on the fair value of each individual element and is recognized when the revenue recognition criteria described above are met, except for time-based licenses which are not unbundled. When software development services are performed and are considered essential to the functionality of the software, the Group recognizes revenue from the software development services on a stage of completion basis, and the revenue from the software when the related development services have been completed.

Contracts with collaboration partners in the medical segment also include multiple elements such as software, maintenance and support services, training, software development services, 3D printed products and royalties. Revenue from those contracts is determined and recognized consistent with other multiple element arrangements.

For certain contracts with collaboration partners, the Company also receives up-front fees, paid by customers for certain exclusivity rights granted only on previously acquired perpetual software licenses, which may be bundled with transfer of title, rights and ownership of certain software products and maintenance and support services. The Group recognizes revenues in such arrangements using the reverse-residual method, where fees for the items that are deemed separate elements, such as maintenance and support services, training, software development services, 3D printed products and royalties are recognized based on their estimated fair value as each element is delivered. The remaining fees within the arrangement are recognized on a straight-line basis over the period of exclusivity, which is up to five years.

Royalty income

Royalty income is recognized on an accrual basis as revenue when the royalty is earned. Such royalty income is earned when the corresponding 3D printed goods have been delivered to the customer.

Interest income

For all financial instruments measured at amortized cost, interest income is recorded using the effective interest rate, which is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the net carrying amount of the financial asset or liability. Interest income is included under financial income in the income statement.

Government grants

Government grants are recognized when there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to development costs or another expense, it is recognized as income over the grant period necessary to match the income on a systematic basis to the costs that it is intended to compensate.

Such grants have been received from the Belgian federal and regional governments and from the European Union in the forms of grants linked to certain of its research and development programs, reduced payroll taxes and the financing of the construction of an office building in Leuven (Belgium).

Where retention of a government grant related to assets or to income, is dependent on the Company satisfying certain criteria, it is initially recognized as deferred income. When the criteria for retention have been satisfied, the deferred income balance is released to other operating income in the consolidated income statement on a systematic basis over the periods in which the entity recognizes as expenses the related costs for which the grants are intended to compensate.

Any government grants recognized as income do not have any unfulfilled conditions or other contingencies attached to them, as otherwise we would not be recognizing income for such.

Other financial income and expenses

Other financial income and expenses include mainly foreign currency gains or losses on financial transactions and bank related expenses.

Taxes

Current income tax

Income tax assets and liabilities for the current period are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, at the reporting date.

Current income tax relating to items that are recognized directly in equity is recognized in equity and not in the income statement. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is calculated using the liability method on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognized for all taxable temporary differences. Deferred tax assets are recognized for all deductible temporary differences, carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilized.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Sales tax

Revenue, expenses and assets are recognized net of the amount of VAT, except:

- Where the sales tax incurred on a purchase of assets or services is not recoverable from the taxation authority, in which case the sales tax is recognized as part of the cost of acquisition of the asset or as part of the expense item as applicable; and
- Receivables and payables that are stated with the amount of sales tax included.

The net amount of sales tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the statement of financial position.

New and revised standards not yet adopted

The standards and interpretations that are issued, but not yet effective, up to the closing date of the Group's financial statements are disclosed below.

A number of new standards, amendments to standards, and interpretations are not effective for 2016, and therefore have not been applied in preparing these accounts.

IFRS 9 Financial Instruments

In July 2014, the IASB issued the final version of IFRS 9 Financial Instruments that replaces IAS 39 Financial Instruments: Recognition and Measurement and all previous versions of IFRS 9. IFRS 9 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. IFRS 9 is effective for annual periods beginning on or after January 1, 2018, with early application permitted. Except for hedge accounting, retrospective application is required but providing comparative information is not compulsory. For hedge accounting, the requirements are generally applied prospectively, with some limited exceptions.

IFRS 9 requires us to record expected credit losses on all of our debt securities, loans and trade receivables, either on a 12-month or lifetime basis. We expect to apply the simplified approach and record lifetime expected losses on all trade receivables.

We plan to adopt the new standard on the required effective date. We expect no significant impact on our balance sheet and equity.

IFRS 15 Revenue from Contracts with Customers

IFRS 15 was issued in May 2014 and establishes a five-step model to account for revenue arising from contracts with customers. Under IFRS 15, revenue is recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer.

The standard provides a single, principles based five step model to be applied to all contracts with customers as follows:

- Identify the contract(s) with a customer;
- Identify the performance obligations in the contract;
- Determine the transaction price;
- Allocate the transaction price to the performance obligations in the contract; and
- Recognize revenue when (or as) the entity satisfies a performance obligation.

The new revenue standard will supersede all current revenue recognition requirements under IFRS. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018. We plan to adopt the new standard on the required effective date. We have performed a preliminary assessment of IFRS 15, which is subject to changes arising from a more detailed ongoing analysis. Once the analysis is performed, the transition method will be chosen. Based on the current sales contracts, both methods are feasible from implementation perspective and we do not expect a significant impact in the implementation. Furthermore, we are considering the clarifications issued by the IASB in April 2016 and will monitor any further developments.

We will continue to assess individual contracts to determine the performance obligations included, relating to licenses and royalty based sales, maintenance and support services and the estimated variable considerations and related constraints.

IFRS 15 provides presentation and disclosure requirements, which are more detailed than under current IFRS. The presentation requirements represent a significant change from current practice and significantly increases the volume of disclosures required in Company's financial statements. Many of the disclosure requirements in IFRS 15 are completely new. In 2016 we developed and started testing appropriate systems, internal controls, policies and procedures necessary to collect and disclose the required information.

Our directors are currently reviewing the impact of the implementation of IFRS 15 and have yet to conclude on whether it will have a significant impact on our financial statements in the year of initial application. This analysis is expected to be finalized in the last quarter of 2017.

IFRS 16, Leases

IFRS 16 was issued in January 2016 and it replaces IAS 17 Leases, IFRIC 4 Determining whether an Arrangement contains a Lease, SIC-15 Operating Leases-Incentives and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model similar to the accounting for finance leases under IAS 17. The standard includes two recognition exemptions for lessees – leases of 'low-value' assets (e.g., personal computers) and short-term leases (i.e., leases with a lease term of 12 months or less). At the commencement date of a lease, a lessee will recognize a liability to make lease payments (i.e., the lease liability) and an asset representing the right to use the underlying asset during the lease term (i.e., the right-of-use asset). Lessees will be required to separately recognize the interest expense on the lease liability and the depreciation expense on the right-of-use asset.

Lessees will be also required to remeasure the lease liability upon the occurrence of certain events (e.g., a change in the lease term, a change in future lease payments resulting from a change in an index or rate used to determine those payments). The lessee will generally recognize the amount of the remeasurement of the lease liability as an adjustment to the right-of-use asset.

IFRS 16 is effective for annual periods beginning on or after January 1, 2019, subject to endorsement by the European Union. Early application is permitted, but not before an entity applies IFRS 15. A lessee can choose to apply the standard using either a full retrospective or a modified retrospective approach. The standard's transition provisions permit certain reliefs. We are however not intending to early adopt this standard.

During 2017 we plan to assess the potential effect of IFRS 16 on our consolidated financial statements. To see the volume of operating leases, please refer to Note 22.

The other standards, interpretations and amendments issued by the IASB and relevant for the Group, but not yet effective are not expected to have a material impact on the Group's future consolidated financial statements:

- Annual Improvements to IFRSs 2014-2016 Cycle (December 2016);
- IFRS 2: Share-based Payment — Amendments to clarify the classification and measurement of share-based payment transactions (June 2016);
- IFRS 7: Financial Instruments: Disclosures (Amendments December 2011) — Deferral of mandatory effective date of IFRS 9 and amendments to transition disclosures
- IFRS 7: Financial Instruments: Disclosures (Amendment November 2013) — Additional hedge accounting disclosures (and consequential amendments) resulting from the introduction of the hedge accounting chapter in IFRS 9
- IFRS 9: Financial Instruments — Classification and Measurement (Original issue July 2014, and subsequent amendments)
- IFRS 10 Consolidated Financial Statements — Amendments regarding the sale or contribution of assets between an investor and its associate or joint venture (September 2014)
- IAS 7: Cash flow statement — Amendments as result of the Disclosure initiative (January 2016)
- IAS 12: Income taxes — Amendments regarding the recognition of deferred tax assets for unrealized losses (January 2016)
- IAS 28: Investments in Associates and Joint Ventures — Amendments regarding the sale or contribution of assets between an investor and its associate or joint venture (September 2014)
- IAS 39: Financial Instruments: Recognition and Measurement — Amendments for continuation of hedge accounting (fair value hedge of interest rate exposure) when IFRS 9 is applied (November 2013)
- IFRIC 22: Foreign Currency Transactions and Advance Consideration (December 2016)

Significant accounting judgments, estimates and assumptions

The preparation of the Group's consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities for future periods.

On an ongoing basis, the Group evaluates its estimates, assumptions and judgments, including those related to revenue recognition, development expenses, share-based payment transactions, income taxes, impairment of goodwill, intangible assets and property, plant & equipment and business combinations.

The Group based its assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Revenue recognition

For revenue recognition, the significant estimates and judgments relate to allocation of value to our separate elements in our multiple-element arrangements and in identifying stage of completion of our customized development of software components for customers. Software development services are mostly billed on time & material basis or occasionally on a fixed basis.

With respect to the allocation of value to the separate elements, the Company is using the stand-alone selling prices or management best estimates of selling prices to estimate the fair value of the software and software-related services to separate the elements and account for them separately. Elements in such an arrangement are also sold on a stand-alone basis and stand-alone selling prices are available. Revenue is allocated to each deliverable based on the fair value of each individual element and is recognized when the revenue recognition criteria described above are met. When we provide software development services considered essential to the functionality of the software, we recognize revenue from the software development services as well as any related software licenses on a percentage of completion basis whereby the arrangement consideration is recognized as the services are performed, as measured by an observable input.

We determine the percentage-of-completion by comparing labor hours incurred to-date to the estimated total labor hours required to complete the project. We consider labor hours to be the most reliable, available measure of progress on these projects. Adjustments to estimates to complete are made in the periods in which facts resulting in a change become known. When the estimate indicates that a loss will be incurred, such loss is recorded in the period identified. Significant judgments and estimates are involved in determining the percent complete of each contract. Different assumptions could yield materially different results.

Our revenue recognition policies require management to make significant estimates. Management analyzes various factors, including a review of specific transactions, historical experience, creditworthiness of customers and current market and economic conditions. Changes in judgments based upon these factors could impact the timing and amount of revenue and cost recognized and thus affects our results of operations and financial condition.

Development expenses

Under IAS 38, internally generated intangible assets from the development phase are recognized if certain conditions are met. These conditions include the technical feasibility, intention to complete, the ability to use or sell the asset under development, and the demonstration of how the asset will generate probable future economic benefits. The cost of a recognized internally generated intangible asset comprises all directly attributable cost necessary to make the asset capable of being used as intended by management. In contrast, all expenditures arising from the research phase are expensed as incurred.

Determining whether internally generated intangible assets from development are to be recognized as intangible assets requires significant judgment, particularly in determining whether the activities are considered research activities or development activities, whether the product enhancement is substantial, whether the completion of the asset is technical feasible considering a company-specific approach, the probability of future economic benefits from the sale or use.

Management has determined that the conditions for recognizing internally generated intangible assets from proprietary software, guide and other product development activities are not met until shortly before the products are available for sale, unless the development is done based upon specific request of the customer and subject to an agreement. As such, development expenditure not satisfying the above criteria and expenditure on the research phase of internal projects are recognized in the consolidated income statement as incurred. This assessment is monitored by the Group on a regular basis.

Share-based payment transactions

The Group measures the cost of equity-settled transactions with employees by reference to the fair value of the equity instruments at the date at which they are granted and measured the cost of cash-settled transactions by reference to the fair value of the equity instrument at the date of reporting. The Group has applied the Black-Scholes valuation model to estimate fair value. Using this model requires management to make assumptions with regards to volatility and expected life of the equity instruments. The assumptions used for estimating fair value for share-based payment transactions are disclosed in Note 13 and are estimated as follows:

- Volatility is estimated based on the average annualized volatility of the Group;
- Estimated life of the warrant is estimated to be until the first exercise period which is typically the month after their vesting;
- Fair value of the shares is determined based on the share price of the Group on Nasdaq at the date of issuance. For the grants prior to the initial public offering, the fair value of the shares was estimated based on a discounted cash flow model with 3-year cash flow projections and a multiple of EBITDA determined based on a number quoted peers in the 3D printing industry.
- The dividend return is estimated by reference to the historical dividend payment of the Group. Currently, this is estimated to be zero as no dividends have been paid since inception.

Income taxes

Deferred tax assets are recognized for unused tax losses to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits together with future tax planning strategies.

As at 31 December 2016, the Group had K€9,451 (2015: K€12,231; 2014: K€10,293) of tax losses carry forward and other tax credits such as investment tax credits and notional interest deduction, of which K€1,570 related to Materialise NV (2015: K€2,009; 2014: K€3,634). These losses relate to the parent and subsidiaries that have a history of losses, do not expire, except for the notional interest deduction of K€315 in 2016 (2015: K€402; 2014: K€338) and may not be used to offset taxable income elsewhere in the Group.

With respect to the unused tax losses of Materialise NV, no deferred tax assets have been recognized in 2016, 2015 and 2014, given that it in view of the Belgian Patent Income Deduction there is an uncertainly to which extent these tax losses will be used in future years. The Belgian Patent Income Deduction allows companies to deduct 80% of the qualifying gross patent income from the taxable basis. Currently the Company is updating the detailed analysis of its tax situation and tax planning. Once this analysis has been finalized, the Company will reassess the need for a valuation allowance on the deferred tax assets.

With respect to the unused tax losses and credits of the other entities, deferred tax assets have been recognized for K€109 only (2015: K€906; 2014: K€58). The Group has not recognized deferred tax assets on unused tax losses totaling K€8,877 in 2016 (2015: K€9,660 ; 2014: K€9,226) given that it is not probable that sufficient positive taxable base will be available in the foreseeable future against which these tax losses can be utilized.

If the Group was able to recognize all unrecognized deferred tax assets, net profit would have increased by K€3,017 in 2016 during which K€783 of tax losses were utilized. Further details on taxes are disclosed in Note 20.10.

Impairment of goodwill, intangible assets and property, plant & equipment

The Group has goodwill for a total amount of K€8,860 as at December 31, 2016 (2015: K€9,664 ; 2014: K€7,714) which has been subject to an impairment test. The goodwill is tested for impairment based on a discounted cash flow model with cash flows for the next five years derived from the budget and a residual value considering a perpetual growth rate. The value in use is sensitive to the discount rate used for the DCF model as well as the expected future cash-inflows and the growth rate used for extrapolation purposes. The key assumptions used to determine the value in use for the different CGUs are disclosed and further explained in Note 5.

When events or changes in circumstances indicate that the carrying amount of the intangible assets and property, plant and equipment may not be recoverable, we estimate the value in use for the individual assets, or when not possible, at the level of CGUs to which the individual assets belong. No impairment charges have been recorded during 2016 (2015: K€104; 2014: K€216).

Business combinations

We determine and allocate the purchase price of an acquired business to the assets acquired and liabilities assumed as of the business combination date. The purchase price allocation process requires us to use significant estimates and assumptions, including

- estimated fair value of the acquired intangible assets;
- estimated fair value of property, plant and equipment; and
- estimated fair value of the contingent consideration.

The contingent consideration as included in the financial statements is recorded at fair value at the date of acquisition and is reviewed on a regular basis, at least annually. The fair value of the contingent consideration is based on risk-adjusted future cash flows of different scenarios discounted using appropriate interest rates. The structure of the possible scenarios and the probability assigned to each one of them is reassessed by management at every reporting period and requires judgement from management about the outcome and probability of the different scenarios as well as the evolution of the variables.

While we are using our best estimates and assumptions as part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the date of acquisition, our estimates and assumptions are inherently uncertain and subject to refinement. Examples of critical estimates in valuing certain of the intangible assets we have acquired or may acquire in the future include but are not limited to:

- future expected cash flows from customer contracts and relationships, software license sales and maintenance agreements;
- the fair value of the plant and equipment
- the fair value of the deferred revenue; and
- discount rates.

4 Business Combinations

Acquisitions in 2016

The Group has not completed any Business Combinations during the year 2016

Acquisitions in 2015

Aldema

The Group signed a sale and purchase agreement on 26 February 2015 to acquire all of the shares and voting interests of Aldema BVBA, an entity incorporated in Belgium, for a total purchase consideration in cash of K€76. Aldema BVBA had developed expertise in metal 3D printing and is integrated in the Materialise Manufacturing segment.

The fair values of the identifiable assets and liabilities at the date of acquisition were:

in thousands of euro	Fair value at acquisition date
Assets	
PP&E	306
Inventory	17
Trade receivables	22
	345
Liabilities	
Financial debts	(295)
Trade payables	(34)
Other liabilities	(117)
	(446)
Total identified assets and liabilities	**(101)**
Goodwill	177
Acquisition price paid in cash	**76**
Cash flow from business combination	
Cash & cash equivalents acquired	—
Acquisition price	(76)
Total cash flow	**(76)**

The carrying value of the acquired assets and liabilities equaled its fair value. As such, the amount of excess paid was fully accounted for as goodwill.

The contribution of the acquired business to the revenue and net loss was respectively K€4 and K€(105) as of 31 December 2015. The revenue and the net loss of the acquired business as if it would have been acquired at 1 January 2015 is not materially different.

The goodwill recognized is primarily attributable to the expected synergies and the accelerated go-to-market time for the products developed with the acquired technology. The goodwill is not deductible for income tax purposes.

Cenat

The Group signed a sale and purchase agreement on 10 March 2015 to acquire all of the shares and voting interests of Cenat BVBA for a consideration in cash of K€1,547 and a contingent consideration related to certain targets set over the coming years between K€0 and K€2.250. The fair value of this contingent consideration as of December 31, 2015 was estimated at K€1,310.

This Belgian-based company was primarily acquired for its technology in the field of embedded computing software and solutions for additive manufacturing control systems.

The fair values of the identifiable assets and liabilities at the date of acquisition were:

in thousands of €	Carrying value at acquisition date	Fair value adjustments	Fair value at acquisition date
Assets			
Technology	3	1,671	1,674
PP&E	34	—	34
Inventory	39	—	39
Trade receivables	2	—	2
Other current assets	32	—	32
Cash	4	—	4
	114	**1,671**	**1,785**
Liabilities			
Financial debts	(8)	—	(8)
Deferred tax liabilities	—	(568)	(568)
Trade payables	(22)	—	(22)
Other liabilities	(39)	—	(39)
	(69)	**(568)**	**(637)**
Total identified assets and liabilities	**45**	**1,103**	**1,148**
Goodwill			1,709
Acquisition price			**2,857**
Cash flow from business combination			
Cash & cash equivalents acquired			4
Consideration paid in cash			(1,547)
Total cash flow			**(1,543)**

As of December 31, 2015 the fair value of the technology amounts to K€1,674. The deferred tax liabilities comprise the tax effect of the fair value adjustment for the technology platform. The fair value of the contingent consideration payable was valued at K€1,310 and relates to the achievement of certain financial targets related to revenue and production costs as a percentage of revenue set for the next years up to 2019. The contingent consideration is payable in the years 2018, 2019 and 2020.

The contribution of the acquired business to the revenue and net loss was respectively K€0 and K€(500) as of 31 December 2015. The revenue and the net loss of the acquired business as if it would have been acquired at 1 January 2015 is not materially different.

The goodwill recognized is primarily attributable to the expected synergies and the accelerated go-to-market time for the products developed with the acquired technology. The goodwill is not deductible for income tax purposes.

The total amount of the acquisition related costs were not material.

Acquisitions in 2014

E-prototypy

The Group signed a sale and purchase agreement on 23 January 2014 to acquire all of the shares and voting interests of e-prototypy, an entity incorporated in Poland, for a total purchase consideration in cash of K€1,260. The entity e-prototypy is a provider of rapid prototypes and 3D printing in Poland since 2008 and is integrated in the industrial production segment.

The acquisition meets the definition of a business.

The fair values of the identifiable assets and liabilities at the date of acquisition were:

in thousands of euro	Carrying value at acquisition date	Fair value adjustments	Fair value at acquisition date
Assets			
Customer relationships	—	93	93
Favorable contract	—	87	87
Other intangible assets	4	—	4
Property, plant & equipment	756	—	756
Other assets	229	—	229
	989	**180**	**1,169**
Liabilities			
Deferred tax liabilities	—	(34)	(34)
Other liabilities	(695)	—	(695)
	(695)	**(34)**	**(729)**
Total identified assets and liabilities other than goodwill	**294**	**146**	**440**
Goodwill			820
Acquisition price paid in cash			**1,260**

The cash flow from the business combination is as follows:

Cash & cash equivalents acquired	98
Acquisition price	(1,260)
Total cash flow	**(1,162)**

The fair value of the customer relationship amounts to K€93 and the fair value of property, plant & equipment (mainly 3D printers) amounts to K€756. The deferred tax liabilities comprise the tax effect of the fair value adjustment for the customer relationships. There were no contingent considerations payable. The fair value of the receivables at acquisition date is K€98 which equals the gross contractual amounts receivable.

The contribution of the acquired business to the revenue and net loss was respectively K€1,115 and K€(264) as of 31 December 2014. The revenue and the net loss of e-Prototype since 1 January 2014 is not materially different.

The goodwill recognized is primarily attributable to the expected synergies, acquiring the market leadership in Poland and highly skilled workforce. The goodwill is not deductible for income tax purposes.

The total amount of the acquisition related costs were not material.

Orthoview

On 21 October 2014 the Group acquired all shares of OrthoView Holdings ("Orthoview"), a United Kingdom based company specializing in Orthopedic Pre-Operative Planning Software. Orthoview generates income mainly in the US, Europe, Japan & Latin-America using its two main sale channels: direct sales and PACS ("Picture Archiving Communication System") partners. The acquisition meets the definition of a business. Orthoview is integrated in the medical segment.

The fair values of the identifiable assets and liabilities at the date of acquisition were:

in thousands of euros	Carrying value at acquisition date	Fair value adjustments	Fair value at acquisition date
Assets			
Technology	—	1,278	1,278
Customer relations	—	4,688	4,688
Other intangible assets	1	—	1
Property, plant & equipment	11	—	11
Cash and cash equivalents	1,522	—	1,522
Other assets	909	—	909
	2,443	**5,966**	**8,409**
Liabilities			
Deferred tax liability	226	(1,325)	(1,099)
Deferred income	(1,754)	346	(1,408)
Accrued charges	(84)	—	(84)
Other liabilities	(154)	—	(154)
	(1,766)	**(979)**	**(2,745)**
Total identified assets and liabilities	**677**	**4,987**	**5,664**
Goodwill			5,060
Acquisition price paid in cash			**10,724**
Cash flow from business combination			
Cash & cash equivalents acquired			1,522
Acquisition price			(10,724)
Total cash flow			**(9,202)**

The accounting for the business combination was finalized during 2015 whereby the fair value of the deferred income has been reduced from K€1,754 to K€1,408 impacting also the fair values of the customer relationships and the technology. The fair value of the customer relationship amounts to K€4,688 and the fair value of the technology amounts to K€1,278. The deferred tax liabilities comprise the tax effect of the fair value adjustment for the customer relationships, technology and deferred income. The purchase price paid at the acquisition date amounted to KGBP 8,472 or K€10,724. The fair value of the receivables is K€909 which equals the gross contractual amounts receivable.

There are no contingent considerations payable.

The goodwill recognized is primarily attributable to the expected synergies that will be realized by increasing the sales of OrthoView's products through the Materialise sales organization and by integrating the Group's 3D technology in the OrthoView's Orthopedic Pre-Operative Planning Software. The goodwill is not deductible for income tax purposes.

The contribution of the acquired business to the revenue and net profit of the Group for the year ended 31 December 2014 were respectively K€937 and K€265. The pro forma revenue and the pro forma net profit of the acquired business would have been K€3,438 and K€797, respectively, if the business would have been acquired on 1 January 2014.

The total amount of the acquisition related costs is K€157 which have been recognized in the line "General and administrative expenses".

Changes in the measurement of the contingent consideration for previous acquisitions

Cenat

The Group signed a sale and purchase agreement on 10 March 2015 to acquire all of the shares and voting interests of Cenat BVBA for a consideration in cash of K€1,547 and a contingent consideration related to certain targets set over the coming years between K€0 and K€2.250. The fair value of this contingent consideration was estimated at time of time of final accounting (31 December 2015) at K€1,310 .

The Group has re-estimated the fair value of the contingent consideration at 31 December 2016 to K€909, based on the historical results and the forecasted financial information for the period 2017 to 2019. The fair value adjustment resulted in a gain of K€455 recorded in the line “other operating income (expenses)”.

The undiscounted earn-out scenarios range from K€610 to K€1,507 . The probabilities for each scenario range from 0 % to 40 % whereby a cumulative probability of at least 50% is allocated to the scenarios with a undiscounted consideration between K€610 and K€641.

5 Goodwill

The goodwill has been allocated to the cash generating units ("CGU") as follows:

	For the year ended December 31		
in thousands of euros	2016	2015	2014
CGU: MAT NV SAM BE	3,241	3,241	1,532
CGU: e-Prototype	775	801	820
CGU: Rapidfit+ (USA)	—	—	107
CGU: OrthoView	4,667	5,445	5,255
CGU: MAT NV Manufacturing (Metal)	177	177	—
Total	**8,860**	**9,664**	**7,714**

The changes in the carrying value of the goodwill can be presented as follows for the year 2016, 2015 and 2014:

in 000€	Gross	Impair-ment	Total
At 1 January 2014	**1,612**	**—**	**1,612**
Additions	5,997	—	5,997
Impairment	—	—	—
Currency translation	105	—	105
At 31 December 2014	**7,714**	**—**	**7,714**
Additions	1,769	—	1,769
Impairment	—	(104)	(104)
Currency translation	285	—	285
At 31 December 2015	**9,768**	**(104)**	**9,664**
Additions	—	—	—
Impairment	—	—	—
Currency translation	(804)	—	(804)
At 31 December 2016	**8,964**	**(104)**	**8,860**

The goodwill of Orthoview (UK) and of e-Prototype (PL) include respectively K€(777) and K€(27) impact of currency translation.

The goodwill related to the acquired business of CENAT during 2015 is allocated to the cash generating unit MAT NV SAM BE.

The Group has performed an impairment test based on a discounted cash flow model with cash flows for the next five years derived from the budget and a residual value considering a perpetual growth rate.

The MAT NV 3D Printing software (BE) and Cenat CGU are included in the reportable segment Materialise Software. The Rapidfit+ (USA), e-Prototypy (PL) and Mat Metal CGU are included in the reportable segment "Materialise Manufacturing". The CGU Orthoview (UK) is included in the reportable segment "Materialise Medical".

CGU: MAT NV 3D Printing software (BE)

The goodwill allocated to the CGU MAT NV 3D Printing software (BE) relates to the goodwill from the acquisition of CENAT in 2015 and the goodwill related to Marcam (DE-3D Printing Software).

The impairment test is based on the projected discounted cash flows resulting from the CGU MAT NV 3D Printing software, considering a period of 5 years. The main assumptions for goodwill impairment testing include a pre-tax discount rate (based on WACC) of 7.17% and a perpetual growth rate of 2%. Other assumptions include the year-on-year growth rate of the revenue, gross margin and the operating costs which has been determined by management based on past experience. It was concluded that the value in use is higher than the carrying value of the cash generating unit of €23.2 million. Based on the sensitivity analysis where the year-on-year growth rate of the revenue, gross margin and the operating costs would be zero and the sensitivity analysis where discount rate would increase with 1%, the value in use would be significantly higher than the carrying value of the cash generating units.

CGU e-prototype

The impairment test on the GCU e-prototype is based on the projected discounted cash flows resulting, considering a period of 5 years. The main assumptions include a pre-tax discount rate (based on WACC) of 10.55% and a perpetual growth rate of 5%. Other assumptions include the year-on-year growth rate of the revenue, gross margin and the operating costs which has been determined by management based on past experience and significant capex in new 3D printing equipment expected to realize in 2017 which will positively impact revenue during 2017 and beyond. It was concluded that the value in use is higher than the carrying value of the cash generating unit of €1.9 million. Based on the sensitive analysis where the year-on-year growth rate of the revenue, gross margin and the operating costs would be zero and the sensitivity analysis where discount rate would increase with 1%, the value in use would be significantly higher than the carrying value of the cash generating units.

CGU Orthoview

The impairment test on the GCU Orthoview is based on the projected discounted cash flows resulting, considering a period of 5 years .The main assumptions include a pre-tax discount rate (based on WACC) of 11.17% and a perpetual growth rate of 2%. Other assumptions include the year-on-year growth rate of the revenue, gross margin and the operating costs which have been determined by management based on past experience. It was concluded that the value in use is higher than the carrying value of the cash generating unit of €9.8 million. Based on the sensitive analysis where the year-on-year growth rate of the revenue, gross margin and the operating costs would be zero and the sensitivity analysis where discount rate would increase with 1%, the value in use would be higher than the carrying value of the cash generating unit. The Orthoview business is being integrated more and more in the existing software business within our Materialise Medical segment. Synergies that are expected from joined product lines are not taken into account in the current impairment review. For 2016 management believes that Orthoview can still be considered a separate cash generating unit. Per end of 2016 we believe that the goodwill for Orthoview is not impaired.

6 Intangible assets

The changes in the carrying value of the intangible assets can be presented as follows for the years 2016, 2015 and 2014:

in thousands of euros	Patents & licenses	Software	Acquired customers and technology	Total
Acquisition value				
At 1 January 2014	**1,664**	**730**	**199**	**2,593**
Additions	595	244	84	923
Acquisition of a subsidiary	1	1	6,343	6,345
Disposals	(2)	(16)	—	(18)
Exchange differences	—	—	81	81
Other	84	8	(63)	29
At 31 December 2014	**2,342**	**967**	**6,644**	**9,953**
Additions	761	671	89	1,521
Acquisition of a subsidiary	—	3	1,474	1,477
Disposals	—	(6)	—	(6)
Currency translation	89	143	(112)	120
Other	10	1	430	441
At 31 December 2015	**3,202**	**1,779**	**8,525**	**13,506**
Additions	606	1,736	—	2,342
Acquisition of a subsidiary	—	—	—	—
Disposals	(18)	(212)	—	(230)
Transfer between accounts	—	490	—	490
Currency translation	(2)	(26)	(923)	(951)
Other	—	2	(6)	(4)
At 31 December 2016	**3,788**	**3,769**	**7,596**	**15,153**

in thousands of euros	Patents & licenses	Software	Acquired customers and technology	Total
Amortization				
At 1 January 2014	**(670)**	**(474)**	**(10)**	**(1,154)**
Additions	(326)	(203)	(538)	(1,067)
Disposals	—	18	—	18
Other	—	(2)	(21)	(23)
At 31 December 2014	**(996)**	**(661)**	**(569)**	**(2,226)**
Additions	(465)	(269)	(851)	(1,585)
Disposals	—	5	—	5
Other	(10)	(33)	—	(43)
At 31 December 2015	**(1,471)**	**(958)**	**(1,420)**	**(3,849)**
Additions	(576)	(559)	(819)	(1,954)
Disposals	3	239	—	242
Transfer between accounts	—	—	—	—
Currency translation	2	26	144	172
Other	—	1	—	1
At 31 December 2016	**(2,042)**	**(1,251)**	**(2,095)**	**(5,388)**
Net carrying value				
At 31 December 2016	1,746	2,518	5,501	9,765
At 31 December 2015	1,731	821	7,105	9,657
At 31 December 2014	1,346	306	6,075	7,727
At 1 January 2014	994	256	189	1,439

Patent & licenses include only the direct attributable external costs incurred in registering the patent and obtaining the license. Software relates to purchased software for internal use only except for software development on certain application interfaces that were almost fully funded by a third party. The software development capitalized, after deduction of the funding, amounts to K€39

The ‘Acquired customers and technology’ have been recognized as part of the acquisition of Advanced Machining Ltd, E-Prototypy, OrthoView and Cenat (see Note 4).

At 31 December 2016, the remaining amortization period for the acquired customers is 7.75 years for OrthoView, 2.00 years for E-Prototypy and 8.25 years for Cenat (2015: 8.75 years for OrthoView, 3.00 years for E-Prototypy and 9.25 years for Cenat).

The total amortization charge for 2016 is K€1,954 (2015: K€1,585 ; 2014: K€1,067) which is included in lines cost of sales, research and development expenses, sales and marketing expenses and general and administrative expenses of the consolidated income statement.

7 Property, plant & equipment

The changes in the carrying value of the property, plant and equipment can be presented as follows for the year 2016 and 2015:

in thousands of euros	Land & buildings	Plant & equipment	Leased assets	Construc-tion in progress	Total
Acquisition value					
At 1 January 2015	**13,268**	**30,139**	**7,116**	**999**	**51,522**
Additions	4,333	4,693	1,200	2,610	12,836
Acquired from business combinations	5	29	306	—	340
Disposals	—	(680)	(325)	—	(1,005)
Transfers	1,824	(1,106)	645	(1,484)	(121)
Currency Translation	289	320	(9)	(11)	589
Other	—	13	—	—	13
At 31 December 2015	**19,719**	**33,408**	**8,933**	**2,114**	**64,174**
Additions	8	4,916	2,483	7,899	15,306
Business combinations	—	—	—	—	—
Disposals	(2)	(2,266)	(699)	(6)	(2,973)
Transfers	3	4,180	540	(5,330)	(607)
Currency Translation	69	—	(20)	(25)	24
Other	—	(39)	4	—	(35)
At 31 December 2016	**19,797**	**40,199**	**11,241**	**4,652**	**75,889**
Amortization					
At 1 January 2015	**(2,451)**	**(16,354)**	**(2,505)**	**—**	**(21,310)**
Depreciation charge for the year	(582)	(3,183)	(1,357)	—	(5,122)
Disposals	—	686	44	—	730
Transfers	(1,281)	(12)	1,293	—	—
Currency Translation	(55)	(51)	(1)	—	(107)
Other	—	(13)	48	—	35
At 31 December 2015	**(4,369)**	**(18,927)**	**(2,478)**	**—**	**(25,774)**
Depreciation charge for the year	(709)	(4,048)	(1,663)	—	(6,420)
Disposals	2	541	669	—	1,212
Transfers	—	117	—	—	117
Currency Translation	(17)	6	2	—	(9)
Other	—	48	—	—	48
At 31 December 2016	**(5,093)**	**(22,263)**	**(3,470)**	**—**	**(30,826)**
Net book value					
At 31 December 2016	14,704	17,936	7,771	4,652	45,063
At 31 December 2015	15,350	14,481	6,455	2,114	38,400
At 1 January 2015	10,817	13,785	4,611	999	30,212

The changes in the carrying value of the property, plant and equipment can be presented as follows for the year 2014:

in thousands of euros	Land & buildings	Plant & equipment	Leased assets	Construc-tion in progress	Total
Acquisition value					
At 1 January 2014	**11,778**	**21,702**	**4,636**	**693**	**38,809**
Additions	180	5,577	2,647	3,824	12,228
Acquired from business combinations	—	713	54	—	767
Disposals	—	(536)	—	(95)	(631)
Transfers	1,092	2,539	(217)	(3,421)	(7)
Currency Translation	218	144	(4)	(2)	356
Other	—	—	—	—	—
At 31 December 2014	**13,268**	**30,139**	**7,116**	**999**	**51,522**
Amortization					
At 1 January 2014	**(1,774)**	**(14,322)**	**(2,096)**	**—**	**(18,192)**
Depreciation charge for the year	(492)	(2,295)	(711)	—	(3,498)
Acquired from business combinations	—	—	—	—	—
Disposals	—	506	—	—	506
Transfers	(155)	(144)	299	—	—
Currency Translation	(30)	(99)	3	—	(126)
Other	—	—	—	—	—
At 31 December 2014	**(2,451)**	**(16,354)**	**(2,505)**	**—**	**(21,310)**
Net book value					
At 31 December 2014	10,817	13,785	4,611	999	30,212
At 1 January 2014	10,004	7,380	2,540	693	20,617

The investments in property, plant & equipment in 2016 amounted to K€15,306 (2015: K€12,836 ; 2014: K€12,228) and mainly related to the building constructions in Leuven and Poland (K€6,098), the investment into new machines and installations (acquired and leased – K€8,254) and the investment in computer equipment (K€890). The investments in 2015 related to the acquisition of land in Leuven (K€2,026) and in Poland (K€1,283) and the investment into new machines and installations (acquired and leased – K€7,298). The additions of 2014 essentially related to the acquisitions of leased and purchased machines.

The Group realized a net gain on disposal of property, plant and equipment of K€149 in 2016 (2015: a net gain of K€73; 2014: a loss of K€23).

No impairment of property, plant and equipment was recorded.

Land and buildings

The carrying value of land included in land and buildings at 31 December 2016 included K€0 of assets under construction (2015: K€0 ; 2014: K€1,764).

Finance leases

The carrying value of finance leases at 31 December 2016 was K€7,771 (2015: K€6,455; 2014: K€4,611). Finance leases are included in the column leased assets and mainly relate to 3D printing machines with a carrying value of K€7,771 at 31 December 2016 (2015: K€6,455; 2014: K€4,148) and for which depreciation of K€1,663 was recorded in 2016 (2015: K€1,357; 2014: K€643). New finance leases in 2016 amount to K€2,757 (2015: K€3,808; 2014: K€2,647) and mainly relate to leased machinery (3D printing machines).

Assets under construction

In 2016 the assets under construction mainly include the building of the new production and office facility in Belgium and Poland (K€6,098) as well as the construction and upgrade of 3D printing machines. In 2015 and 2014 the assets under construction were mainly the construction and upgrade of 3D printing machines that are being built by the Group.

Borrowing costs

Because insignificant, no borrowing costs were capitalized during any of the years ended December 31, 2016, 2015 and 2014.

Pledges

Land and buildings with a carrying amount of K€10,388 (2015: K€7,479; 2014: K€7,906) and buildings under construction with a carrying amount of K€2,206 (2015: nil; 2014: nil) are subject to pledges to secure several of the Group's bank loans (Note 22).

8 Investments in joint ventures

The Group has one investment in the joint venture RSprint NV (Belgium). The summarized financial information of RSprint NV can be presented as follows:

in 000€	2016°	2015	2014
(Share in the) joint venture's statement of financial position°			
Current assets	610	414	173
Non-current assets	132	838	381
Goodwill	—	—	—
Current liabilities	(1,060)	(234)	(135)
Non-current liabilities	—	—	—
Shareholders' Equity	(318)	1,018	419
(Share in the) joint venture income and expenses (loss)°			
Revenue	720	214	—
Profit (loss) *	(2,036)	(401)	(81)

* there are no discontinued operations
° as from 2016 the complete numbers of the joint venture's financial statements are presented (100%), for the years 2015 and 2014 only the share of Materialise in the joint venture's financial statements are presented.

Total current assets include cash and cash equivalents for a total amount of K€86 per 31 December 2016 (2015: K€518 ; 2014: K€222). Profit (loss) include total deprecations and amortization for a total amount of K€34 in 2016 (2015: K€218 ; 2014: K€31).

The movement of the carrying value of the joint venture is as follows:

	in 000€
Carrying value per 31 December 2014	**419**
Additional investment	1,000
Share in loss	(401)
Carrying value per 31 December 2015	**1,018**
Additional investment	—
Share in loss	(1,018)
Carrying value per 31 December 2016	**—**

The Group has not recognized its share in the losses of the joint venture for a total amount of K€161 in 2016.

9 Inventories and other assets

Other non-current assets

Other non-current assets include the following:

	For the year ended December 31		
in 000€	2016	2015	2014
Tax credits	1,766	—	—
Guarantees and deposits	342	320	270
Other	46	36	58
Total non-current assets	**2,154**	**356**	**328**

The non-current tax credits relate to tax credits that will be realized over more than one year. In 2015 and 2014, all tax credits were presented as current based on the assessment of the realization at that time.

Inventories

Inventories include the following:

	For the year ended December 31		
in 000€	2016	2015	2014
Raw materials	4,297	3,390	2,175
Work in progress	2,693	1,442	1,096
Finished goods	880	555	389
Total inventories (at cost or net realizable value)	**7,870**	**5,387**	**3,660**

The amount of the inventory written-off as an expense is K€98 (2015: K€88 ; 2014: K€50).

Other current assets

Other current assets include the following:

	For the year ended December 31		
in 000€	2016	2015	2014
Deferred charges	1,483	1,442	1,034
Tax credits	176	1,285	696
Accrued income	666	254	236
Other tax receivables	604	958	253
Other non-trade receivables	1,552	1,054	1,321
Total current assets	**4,481**	**4,993**	**3,540**

10 Trade receivables

The trade receivables include the following:

	For the year ended December 31		
in 000€	2016	2015	2014
Trade receivables	27,990	23,348	18,660
Amortization receivables	(511)	(505)	(290)
Total	**27,479**	**22,843**	**18,370**

Trade receivables are non-interest bearing and are generally on payment terms of 30 to 90 days.

As at 31 December 2016, trade receivables of an initial value of K€511 (2015: K€506; 2014: K€290) were impaired and fully provided for. See below for changes in the impairment of receivables.

in 000€	
At 1 January, 2014	**(1,252)**
Addition	(473)
Usage	1,162
Reversal	273
At 31 December, 2014	**(290)**
Addition	(424)
Usage	39
Reversal	170
At 31 December, 2015	**(505)**
Addition	(266)
Usage	190
Reversal	70
At 31 December, 2016	**(511)**

11 Cash and cash equivalents and held to maturity investments

Cash and cash equivalents include the following:

	For the year ended December 31		
in 000€	2016	2015	2014
Cash at bank	45,645	41,701	39,921
Cash equivalents	10,267	9,025	11,098
Total	**55,912**	**50,726**	**51,019**

Cash at banks earns interest at floating rates based on daily bank deposit rates. Short-term deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements of the Group, and earn interest at the respective short-term deposit rates.

As at 31 December 2014, the Group also owned held to maturity investments for an amount of K€10,000. These were investments on term accounts between 6 to 12 months and earned interest at a fixed deposit rate.

There were no restrictions on cash during 2016, 2015 or 2014.

12 Equity

Share capital

The share capital of the parent company Materialise NV consists of 47,325,438 ordinary nominative shares at December 31, 2016 (2015: 47,325,438 ;2014: 47,147,256) with no nominal but par value of €0.058 in 2016 (2015: €0.058 ; 2014: €0.059) for a total amount of K€2,729 at 31 December 2016 (2015: K€2,729 ; 2014: K€2,788).

in 000€, except share data	Total number of founder shares	Total number of ordinary shares	Total share-holders' capital	Total share-premium
Outstanding at 1 January, 2014	**—**	**39,072,056**	**2,235**	**12,321**
Capital increase IPO 30/06/2014	—	8,000,000	480	70,004
Capitalization costs IPO 30/06/2014	—	—	—	(6,279)
Equity settled share-based payments expense	—	—	—	604
Capital increase by exercise warrants on 31/10/2014	—	75,200	73	—
Outstanding on 31 December, 2014	**—**	**47,147,256**	**2,788**	**76,650**
Transfer share capital to share premium	—	—	(69)	69
Capital increase in cash	—	80,182	5	575
Capital increase via exercise of warrants	—	98,000	5	90
Equity settled share-based payments expense	—	—	—	714
Outstanding on 31 December, 2015	**—**	**47,325,438**	**2,729**	**78,098**
Transfer share capital to share premium	—	—	—	—
Capital increase in cash	—	—	—	—
Capital increase via exercise of warrants	—	—	—	—
Equity settled share-based payments expense	—	—	—	921
Outstanding on 31 December, 2016	**—**	**47,325,438**	**2,729**	**79,019**

The transfer of the share capital to the share premium in 2015 relates to the capital increase by exercise of warrants on October 31, 2014 whereby the Group has transferred an amount of K€69 to share premium as registered in the notarial deed of March 5, 2015.

On March 5, 2015, the Group has issued 80,182 new shares at a price of €7.22 per share resulting in an increase of the share capital by K€5 and the share premium by K€575. The creation of the shares was done as part of the deal with the former shareholders of Mobelife.

The shareholders' capital increased by K€5 in 2015 (2014: K€73) as a result of the exercise of warrants outstanding and fully vested. The number of new shares issued was 98,000 at a price is €0.98 per share.

On June 30, 2014, the Group has successfully completed and settled its initial public offering on Nasdaq at the initial stock price $12 and the issuance of 8,000,000 new ordinary shares (post stock-split) with a total increase in share capital and share premium of K€70,484 (equivalent of K$96,000). The total expenses directly related to the share capital increase amounted to K€6,279 which were deducted from the share premium.

In addition, the shareholders have approved on June 30, 2014 a stock-split of 1 ordinary share to 4 new ordinary shares and the pre-existing classes of ordinary shares have been eliminated. In this respect, all share amounts and the EPS were adjusted retro-actively to reflect the stock-split.

Until 2013, the ordinary shares were divided in three categories: A, B and C with similar voting and dividend rights. The three categories have been eliminated as part of the initial public offering in June 2014.

The Company also issued previously 300,000 founder shares which do not represent shareholders' capital but grant the holder voting and dividend rights. The terms & conditions are further discussed in Note 24. The General Meeting of Shareholders held on November 28, 2013 converted the 300,000 founder shares into ordinary A shares resulting in a dilution for the existing shareholders by 3.07%. Those A shares will benefit from all rights allocated to the ordinary shares.

The shareholders of the Group have granted to the Group's Board of Director's, by a decision taken on April 23, 2014, the right to increase the share capital by K€2,715 without the consent of the Shareholders for a maximum of 5 years.

Share premium

In Belgium, the portion of the capital increase in excess of par value is typically allocated to share premium.

The carrying value of the share premium is K€79,019 at December 31, 2016 (2015: K€78,098; 2014: K€76,650). The change in 2016 is the result of the share-based payment expense of K€921.

The change in 2015 is the result of (i) the transfer of K€69 from share capital; (ii) the portion of the capital increase in cash of K€575; (iii) the portion of the capital increase due to the exercise of warrants of K€90 and (iv) the result of the share-based payment expense of K€714.

Reserves

The nature and purpose of the reserves is as follows:

	For the year ended December 31		
in 000€	2016	2015	2014
Legal reserve	279	226	226
Retained earnings	(1,882)	1,181	5,538
Reserves	**(1,603)**	**1,407**	**5,764**

The legal reserve is increased by reserving 5% of the yearly statutory profit until the legal reserve reaches at least 10% of the shareholders' capital. The legal reserve cannot be distributed to the shareholders.

The Group did not pay any dividend during 2016, 2015 and 2014.

Non-controlling interest

The non-controlling interest is zero at December 31, 2016 and at December 31, 2015. The non-controlling interest in 2014 represents 22.31% of the shares in the subsidiary Mobelife that are held by third parties.

No non-controlling interest is recognized for the 16.67% held by a third party in RapidFit+ as the amount was reclassified to a financial liability.

Mobelife

On March 5, 2015 the Group acquired all non-controlling interests in the subsidiary Mobelife for a total cash consideration of K€1,377. The acquisition was accounted for as an equity transaction resulting in a K€1,562 loss recognized in the reserves attributable to the owners of the parent. The shareholders of Mobelife paid during 2014 uncalled capital for a total amount of K€181 of which K€33 by the non-controlling interest. A loss on dilution for the Group has been recognized for an amount of K€7 in 2014.

At the end of December 2014, the shareholders' capital of Mobelife was increased by K€31 as a result of the exercise of fully vested warrants. A gain in dilution for the Group has been recognized in the amount of K€24.

Rapidfit+

On February 28, 2013, the Group has carved-out its Rapidfit+ business into a newly created entity Rapidfit+. On June 27, 2013, the investor PMV-TINA has subscribed to 100% of the capital increase of K€1,000 resulting in a dilution of the Group's interest in Rapidfit+ from 100% to 83.33%. As a result of this dilution, the Group recognized a gain of K€736 in consolidated reserves at December 31, 2013.

The shareholders of Rapidfit+ have decided to increase the capital of the entity as of December 23, 2014 to K€2,235. Each shareholder has participated in proportion to its interest in Rapidfit+ whereby the Group participated for K€3,750 (of which K€703 as capital increase and K€3,047 as increase share premium) and PMV-TINA participated for K€750 (of which K€141 as capital increase and K€609 as increase share premium). The capital increase subscribed by PMV-TINA is shown in the reserves as no non-controlling interest is presented for Rapidfit+ (see further).

After the capital increase the shareholders of Rapidfit+ have decided to reduce the shareholders capital by K€1,410 by incorporating the historical losses of K€1,328 and creating a reserve of K€82.

The Group has purchased a call option and written a put-option on the non-controlling interest in Rapidfit+. The call option is accounted for in accordance with IAS 39 and has an exercise price which is calculated according to a specified contractual formula based on the following parameters: invested capital, multiple of EBITDA minus net financial debt. Currently the call option is deeply out of the money due to the significant losses of Rapidfit+ and as such the fair value is estimated at zero at December 31, 2016. The call option is exercisable between 2015 and 2019.

The written put option has been recognized as a financial liability and measured at the fair value of the redemption amount and amounts to K€735 at 31 December 2016 (2015: k€673; 2014 K€639). The undiscounted estimated redemption amount totals K€875 at December 31, 2016 (2015: K€875; 2014: K€875). The redemption price has an exercise price according to a specified contractual formula based on the following parameters: invested capital, multiple of EBITDA minus net financial debt. The initial recognition resulted in a reclassification of K€264 from non-controlling interest and K€64 from consolidated reserves. The parameter "invested capital" of the contractual formula has been adjusted in December 2014 to reflect the impact of the capital increase and the exercise period has been extended with one year. As a result, the estimated redemption amount of the written put option has increased by K€273 which has been recorded in diminution of the consolidated reserves. The written put option is exercisable between 2017 and 2021.

In addition, Rapidfit+ has issued 10 dilution warrants to the non-controlling interest which are exercisable upon occurrence of certain specified events. The fair value of the dilution warrants is zero per end of 2016 (2015: zero; 2014: zero).

13 Share-based payment plans

Share-based payment plans of the parent

The changes of the year for the warrant plans are as follows:

	2016	2015	2014
Outstanding at 1 January	**1,401,852**	**1,579,955**	**505,064**
Granted	350,000	18,180	1,398,540
Forfeited / Cancelled	(70,852)	(98,283)	(248,449)
Exercised	—	(98,000)	(75,200)
Outstanding at 31 December	**1,681,000**	**1,401,852**	**1,579,955**
Exercisable at 31 December	**—**	**—**	**123,163**

The Group's share-based payment plans are all equity-settled except for the IPO warrants that have been granted to certain employees in certain countries due to legal requirements which are cash-settled.

The number of outstanding warrants has been adjusted to reflect the 1-to-4 stock split decided in June 2014.

Equity-settled share-based payment plans

The Group has several plans in place (2007 warrant plan, 2013 warrant plan, IPO warrant plan and 2015 warrant plan) which have similar terms except for the exercise price, except for the 2015 warrant plan.

2007 warrant plan and 2013 warrant plan

Each warrant gives the right to the holder to one ordinary share of the parent Company. The warrants have a contractual term of 10 years and vest for 25% in the fourth year; 25% in the fifth year; 25% in the sixth year and 25% in the seventh year. Warrants are exercisable as from the month after they have vested and in the subsequent exercise periods. There are no cash settlement alternatives and the Group does not have a practice of cash settlement for these warrants. The warrants have a contractual term of 10 years.

The Group granted in October 2013 and December 2013 under the 2013 warrant plan 323,096 warrants to senior management, directors and certain employees with an exercise price ranging from €7.86 to €8.54. A total of 166,800 warrants were additionally granted to senior management and directors in January 2014.

The status of the 2007 and 2013 warrant plan at 31 December is as follows:

	2016	2015	2014
Outstanding at 1 January	**439,896**	**555,896**	**505,064**
Granted	—	—	166,800
Forfeited / Cancelled	(4,800)	(18,000)	(40,768)
Exercised	—	(98,000)	(75,200)
Outstanding at 31 December	**435,096**	**439,896**	**555,896**
Exercisable at 31 December	**—**	**—**	**123,163**

IPO warrant plan

Each warrant gives the right to the holder to one ordinary share of the parent Company. The warrants have a contractual term of 10 years and vest for 25% in the fourth year; 25% in the fifth year; 25% in the sixth year and 25% in the seventh year. Warrants are exercisable as from the month after they have vested and in the subsequent exercise periods. There are no cash settlement alternatives and the Group does not have a practice of cash settlement for these warrants. The warrants have a contractual term of 10 years.

The Group granted 979,898 warrants in July 2014 and 36,151 warrants in November 2014 in the context of the initial public offering to the employees of the Group with an exercise price of €8.81 ("IPO warrant plan"). The Group granted an additional 18,180 warrants to employees in July 2015 under the IPO warrant plan.

The status of the IPO warrant plan at 31 December is as follows:

	2016	2015	2014
Outstanding at 1 January	**772,859**	**828,342**	**—**
Granted	—	18,180	1,016,052
Forfeited / Cancelled	(45,260)	(73,663)	(187,710)
Exercised	—	—	—
Outstanding at 31 December	**727,599**	**772,859**	**828,342**
Exercisable at 31 December	**—**	**—**	**—**

Warrant plan 2015

The Board of Directors decided on 18 December 2015 on a new plan ("2015 warrant plan") by which it can grant up to 1,400,000 warrants to employees. Each warrant gives the right to the holder to one ordinary share of the parent Company. The warrants vest for 10% on the second anniversary of the granting; 20% on the third anniversary of the granting; 30% on the fourth anniversary of the granting and 40% on the fifth anniversary of the granting, unless otherwise decided by the board of directors or one or more of its representatives granted powers thereto. Warrants are exercisable only after they have vested and only during a period of (i) four weeks following the publication of the results of the parent Company of the second and fourth quarter, or (ii) if no quarterly results are published, during the month March and the month September of every year. There are no cash settlement alternatives and the Group does not have a practice of cash settlement for these warrants. The warrants have a term of 10 years.

The Group granted 350,000 warrants in September 2016 to the employees of the Group with an exercise price of €6.45. The status of the 2015 warrant plan at 31 December is as follows:

	2016
Outstanding at 1 January	**—**
Granted	350,000
Forfeited / Cancelled	—
Exercised	—
Outstanding at 31 December	**350,000**
Exercisable at 31 December	**—**

Fair value

The fair value of the warrants is estimated at the grant date using the Black-Scholes option pricing model, taking into account the terms and conditions upon which the warrants were granted.

The following table provides the input to the Black-Scholes model for the 2007 warrant plan, 2013 warrant plan, IPO warrant plan and 2015 warrant plan:

	Plan 2015 (sept 16)	IPO 2015 (Nov)	IPO 2014 (Nov)	IPO 2014 (June)	2013 (Dec) *	2013 (Oct) *	2007*
Return dividend	0%	0%	0%	0%	0%	0%	0%
Expected volatility	47%	47%	50%	46%	50%	53%	56%
Risk-free interest rate	0.24%	1.17%	1.12%	1.70%	2.56%	2.43%	4.25%
Expected life	4.30	5.50	5.50	5.50	5.50	5.50	5.50
Exercise price (in €)	6.45	8.81	8.81	8.81	8.54	7.86	3.92
Stock price (in €)	6.42	8.08	8.67	8.81	18.09	18.09	3.92
Fair value SAR (in €)	2.41	3.30	3.94	3.83	12.23	12.77	2.15

(*) Exercise price, stock price and fair value are not adjusted for the 1 to 4 stock-split completed in June 2014.

The above input for the Black-Scholes model have been determined based on the following:

- The dividend return is estimated by reference to the historical dividend payment of the Group. Currently, this is estimated to be zero as no dividend have been paid since inception.
- Expected volatility is estimated based on the average annualized volatility of the volatility of the Group's stock (until Sept 2016: of a number of quoted peers in the 3D printing industry and the volatility of the Group's stock);
- Risk-free interest rate is based on the interest rate applicable for the 10Y Belgian government bond at the grant date
- Estimated life of the warrant is determined to be until the first exercise period which is typically the month after vesting;
- Fair value of the shares is determined based on the share price of the Group on Nasdaq at the date of valuation. For the grants prior to the initial public offering, the fair value of the shares was estimated based on a discounted cash flow model with 3-year cash flow projections and a multiple of EBITDA determined based on a number of quoted peers in the 3D printing industry.

The expense arising from share-based payment transactions for the warrants plans mentioned above was K€921 in 2016 (2015: K€714 ;2014:K€604).

The weighted average remaining estimated life of the warrants outstanding as of 31 December 2016 is 4.38 years (2015: 5.50 years; 2014: 4.65 years). The weighted average fair value for the warrants outstanding at the end of 2016 was €6.01 (2015: €3.54 ; 2014: €3.45). The weighted average exercise price for the warrants outstanding at the end of 2016 was €8.06 (2015: €8.81 ; 2014: €8.46).

The weighted average share price at the date that the 98,000 options during 2015 were exercised was €7.91.

Cash-settled share-based payment plans

The Group has issued 215,688 stock appreciation rights ("SAR") in July 2014 towards certain employees in certain countries due to legal requirements with similar terms and conditions as the IPO warrant plan except that the SAR will be settled in cash. The exercise price of the SAR is €8.81.

The status of this plan is as follows:

	2016	2015	2014
Outstanding at 1 January	**189,097**	**195,717**	**—**
Granted	—	—	215,688
Forfeited / Cancelled	(20,792)	(6,620)	(19,971)
Exercised	—	—	—
Outstanding at 31 December	**168,305**	**189,097**	**195,717**
Exercisable at 31 December	**—**	**—**	**—**

The SAR plan grants the bearer the right to a cash payment equal to the difference between the exercise price and the stock price at the exercise date. This plan is considered a cash settled shared based payment and is as such recorded as liability.

The SAR's have a contractual term of 10 years and vest for 25% in the fourth year; 25% in the fifth year; 25% in the sixth year and 25% in the seventh year. SAR's are exercisable as from the month after they have vested and in the subsequent exercise periods.

The fair value of the SAR is estimated at each reporting date using the Black-Scholes option pricing model, taking into account the terms and conditions upon which the warrants were granted. The following table lists the input used for the Black-Scholes model:

	2016	2015
Return dividend	0%	0%
Expected volatility	50%	47%
Risk-free interest rate	0.55%	0.98%
Expected life	3.25	4.25
Exercise price (in €)	8.81	8.81
Stock price (in €)	7.30	6.48
Fair value SAR (in €)	2.17	1.87

The expense arising from share-based payment transactions for the SAR's plan was K€46 in 2016 (2015: K€43 ; 2014: K€60). The carrying value of the liability at 31 December 2016 amounts to K€147 (2015: K€101 ; 2014: K€59). The total intrinsic value of the liability for warrants currently exercisable was K€0 at 31 December 2016, 2015 and 2014.

Share-based payment plans of Mobelife

The changes in the year for the Mobelife warrant plan 2012 and 2009 are follows:

	2016	2015	2014
Outstanding at 1 January	**—**	**—**	**404**
Granted	—	—	—
Forfeited / Cancelled	—	—	—
Exercised	—	—	(404)
Outstanding at 31 December	**—**	**—**	**—**
Exercisable at 31 December	**—**	**—**	**—**

Mobelife warrant plan 2009

The subsidiary Mobelife issued and granted on 30 March 2009 405 warrants to its executive management with an exercise price of €100. Each warrant gives the holder the right to one ordinary share of Mobelife. The warrants have a contractual term of 7 years and vest for 25% in the fourth year; 25% in the fifth year; 25% in the sixth year and 25% in the seventh year. Warrants are exercisable as from the month after they have vested and in the subsequent exercise periods. There are no cash settlement alternatives and the Group does not have a practice of cash settlement for these warrants.

The fair value of the warrants is estimated at the grant date using the Black-Scholes option pricing model, taking into account the terms and conditions upon which the warrants were granted.

Mobelife warrant plan 2012

The subsidiary Mobelife issued on 17 January 2012 100 warrants to its executive management with an exercise price of €536. Each warrant gives the holder the right to one ordinary share of the subsidiary Mobelife. The warrants have a contractual term of 7 years and vest for 25% in the fourth year; 25% in the fifth year; 25% in the sixth year and 25% in the seventh year. Warrants are exercisable as from the month after they have vested and in the subsequent exercise periods. There are no cash settlement alternatives and the Group does not have a practice of cash settlement for these warrants.

The fair value of the warrants is estimated at the grant date using the Black-Scholes option pricing model, taking into account the terms and conditions upon which the warrants were granted.

The following table lists the input to the Black-Scholes model both warrant plans:

	Warrantplan	
	2009	2012
Return dividend	0%	0%
Expected volatility	31%	56%
Risk-free interest rate	4.25%	4.25%
Expected life	5.50	5.50
Exercise price	€100.00	€536.00
Fair value shares	€100.00	€536.00
Fair value option	36.89	293.64

The above input for the Black-Scholes model have been determined on the same basis as disclosed above.

The expense arising from share-based payment transactions for Mobelife warrant plans was K€0 in 2016 (2015: K€0; 2014: K€2).

Share-based payment plans of Rapidfit+

The subsidiary Rapidfit+ has issued a warrant plan on 23 August 2013 where a maximum of 300 warrants can be offered to management with an exercise price of €553.92. In January 2014, a total of 199 warrants were granted and accepted.

The changes for the year for the RapidFit+ warrant plan are as follows:

	2016	2015	2014
Outstanding at 1 January	199	199	—
Granted	—	—	199
Forfeited / Cancelled	—	—	—
Exercised	—	—	—
Outstanding at 31 December	**199**	**199**	**199**
Exercisable at 31 December	**—**	**—**	**—**

The following table lists the input to the Black-Scholes model for the RapidFit+ warrant plan:

	2014
Return dividend	0%
Expected volatility	50%
Risk-free interest rate	2.29%
Expected life	5.5
Exercise price	€553.92
Fair value option	€262.70

The expense arising from share-based payment transactions for Rapidfit+ warrant plan was K€10 in 2016 (2015: K€10; 2014: K€9).

14 Loans and borrowings

The loans and borrowings include the following:

in 000€	Interest rate	Maturity	For the year ended December 31 2016	2015	2014
€5,000 bank loan	4.61%	Jun-2027	3,847	4,125	4,390
€4,050 bank loan	1.24%	Dec-2032	4,050	—	—
€2,390 bank loan	1.36%	Oct-2020	1,847	2,392	—
€2,354 bank loan	1.15%	Sep-2032	2,354	—	—
€2,000 bank loan	4.43%	Nov-2020	658	808	952
€1,800 bank loan	0.92%	Sep-2023	1,738	—	—
€1,750 bank loan	5.40%	Dec-2022	906	1,019	1,138
€1,600 investment loan	1.55%	Nov-2022	1,382	1,600	—
€1,000 convertible bond	3.70%	Oct-2020	1,000	1,000	1,011
€1,000 straight loan	1.79%	Feb-2015	—	—	1,000
€899 investment loan	1.12%	Dec-2022	775	900	—
€750 bank loan	1.07%	Sep-2023	750	—	—
€630 institutional loan	0.25%	Sep-2021	630	—	—
€613 bank loan	0.77%	Jun-2023	570	—	—
€612 bank loan	0.85%	Dec-2023	612	—	—
€609 bank loan	1.96%	Mar-2019	—	405	529
€500 bank loan	1.78%	Dec-2018	205	305	404
€490 bank loan	1.02%	Mar-2023	439	—	—
€486 bank loan	0.78%	Jun-2023	452	—	—
€468 bank loan	0.76%	Sep-2023	452	—	—
€450 bank loan	0.93%	Dec-2023	450	—	—
€448 bank loan	5.11%	Dec-2019	200	271	345
€425 bank loan	0.78%	Jun-2023	395	—	—
€414 bank loan	0.76%	Sep-2023	399	—	—
€400 loan with related party	4.23%	Oct-2025	266	290	313
Interest free loan agreements	—	Oct-2016; Mar-2020	306	856	1,652
Obligations under finance lease with related party	0.00%	2015-2017	—	—	1,087
Obligations under finance leases (third parties)	—	2016-2023	7,339	5,823	3,127
Short term credit agreements	0.90%	Jun-2015	—	—	325
Short term credit agreements	1.08%	Jun-2016	—	25	—
Other loans	—	—	1,784	1,270	1,074
Total loans and borrowings			**33,806**	**21,089**	**17,347**
of which current			5,539	4,482	5,499
non-current			28,267	16,607	11,848

K€5,000 secured bank loan

This bank loan has been used to finance the construction of a portion of the office and production building in Leuven (Belgium). The loan started on December 23, 2011 and was completely drawn at K€5,000 as of June 30, 2012. The loan matures on 30 June 2027. The loans bears a fixed interest rate of 4.61% with monthly fixed installments as from July 1, 2012. This bank loan is secured with a mortgage on the building.

K€4,050 secured bank loan

This bank loan has been used to finance the construction of a portion of the office and production building in Leuven (Belgium). The loan was agreed for a total amount of K€12,000 and was first drawn on December 28, 2016 for the amount of K€4,050. The loan matures on December 31, 2032. The loans bears a fixed interest rate of 1.24%. Repayment of capital will only start as of December 1, 2022. This bank loan is secured with a mortgage on the building.

K€2,390 bank loan

This bank loan has been used to finance the Polish operations. The loan started on October 22, 2015 and is repaid in 60 fixed monthly payments. The interest rate is fixed at 1.36%.

K€2,354 secured bank loan

This bank loan has been used to finance the construction of the office and production building in Poland. The loan was agreed for a total amount of K€6,000 and was first drawn on December 28, 2016 for the amount of K€2,354. The loan matures on September 30, 2032. The loan bears a fixed interest rate of 1.15%. The repayment of the capital will only start as of June 1, 2019. This bank loan is secured with a mortgage on the building.

K€2,000 secured bank loan

This bank loan has been used to finance the construction of a portion of the office and production building in Leuven. The loan started on December 1, 2005 with a maturity of 15 years. The loans bears a fixed interest rate of 4.43% with monthly fixed installments. This bank loan is secured with a mortgage on the building.

K€1,800 bank loan

This bank loan has been used to finance the purchase of production equipment. The loan started on October 28, 2016 with a maturity of 7 years. The loans bears a fixed interest rate of 0.92% with monthly fixed installments.

K€1,750 secured bank loan

This bank loan has been used to finance the construction of an office in Czech Republic. The loan started on November 1, 2008 with a maturity of 14 years. The loans bears a fixed interest rate of 5.40% with monthly fixed installments. This bank loan is secured with a mortgage on the building.

K€1,600 investment loan

This loan was contracted to finance the operations of Materialise USA and runs for 7 years. Interest is fixed at 1.55% and payments are done each quarter.

K€1,000 convertible bond with related party

The Group has issued on October 28, 2013 1,000 convertible bonds with a related party for a total amount of K€1,000. The bonds have been fully subscribed by a member of our senior management.

The conditions of the convertible bond can be summarized as follows:

- Number of convertible bonds: 1,000
- Nominal value per bond: K€1
- Contractual life: 7 years
- Interest: 3.7%
- Conversion period: from 1 January 2017 until maturity
- Conversion price: €1.97

The maximum number of ordinary shares that can be issued upon conversion is 508,904.

The Group has estimated the fair value of a similar liability however without any conversion option by reference to a number of quoted peers in Belgium. The fair value was estimated at K€907. Upon initial recognition, an amount of K€93 was recognized in consolidated reserves reflecting the fair value of the conversion option.

Straight loan

Rapidfit N.V. has obtained a straight loan in order to finance its working capital needs. The loan was repaid by the end of 2016.

K€900 investment loan

This loan was contracted to finance the operations of Materialise Poland and runs for 7 years. Interest is fixed at 1.12% and payments are monthly.

K€750 bank loan

This loan was contracted to finance the operations of Materialise NV and runs for 7 years. Interest is fixed at 1.07% and payments are monthly.

K€630 institutional loan

This loan was contracted with a financial institution in Germany to finance the production operations of Materialise Germany for a maximum amount of K€2,000. Per end of 2016 K€630 has been drawn. The loan is repayable over a 4 year period, starting as of September 2017 with a fixed interest rate of 0.25% payable per quarter.

K€613 bank loan

This loan was contracted to finance the purchase of a 3D printer and runs for 7 years. Interest is fixed at 0.77% and payments are monthly.

K€612 bank loan

This loan was contracted to finance the purchase of a 3D printer and runs for 7 years. Interest is fixed at 0.85% and payments are monthly.

K€609 bank loan

This bank loan was contracted in order to finance the acquisition of machines.

K€500 secured bank loan

This bank loan has been used to finance the purchase of a 3D printing machine. The loan started on December 1, 2013 with a maturity of 5 years. The loans bear a fixed interest rate of 1.78% with monthly fixed installments and is secured.

K€414-K€490 bank loans

Several bank loans were contracted to finance the purchase of 3D printers and other equipment. The maturity ranges from 5 to 7 years, and the annual interest rate varies between 0.76% and 5.11%.

Interest-free loan agreements

The Group has several interest-free loans with an outstanding nominal amount of K€308 (2015: K€881; 2014: K€1,595). The interest-free loans have been initially measured at fair value, which is the present value of the future installments with a discounting rate of 3.04%. The maturity of the remaining loans is February and March 2020 and have either monthly or quarterly installments. The carrying value at December 31, 2016 is K€306 (2015: K€856; 2014: K€1,652). The difference between the carrying value and the nominal value is recognized as financial income over the loan period.

The loans have been granted by either government organizations or business partners.

Finance lease obligations with related parties

The Group has signed two finance lease obligations with Ailanthus NV, a related party to and shareholder of, the Company, for the land and building in Leuven. In April 1998, the Group has signed a finance lease agreement with Ailanthus NV to lease land and a portion of the office and production building. The lease has a term of 15 years and includes a purchase option for the land and the building. The Group has determined that this lease is a finance lease because (i) the purchase option is assumed to be significantly lower than the fair value of the land and building and (ii) it was very likely at inception of the lease that the Group would exercise its purchase option. The amounts outstanding as of December 31, 2016 is K€0 (2015: K€0; 2014: K€1,000). The interest expense for the year 2016 is K€0 (2015: K€0; 2014: K€0). The term of the lease expired at March 31, 2013 and the purchase option has been exercised. Ownership has been transferred on February 18, 2015.

In October 2001, the Group has signed a finance lease agreement with Ailanthus NV to lease land and a portion of a new production building. The lease has a term of 15 years and a purchase option for the land and the building. The Group has determined that this lease is a finance lease because (i) the purchase option is assumed to be significantly lower than the fair value of the land and building and (ii) it was very likely at inception of the lease that the Group would exercise its purchase option. The amounts outstanding as of December 31, 2016 is K€74 (2015: K72; €2014: K€86). The interest expense for the year 2016 is K€4 (2015: K€5; 2014: K€6). The term of the lease expired on September 20, 2016 and the purchase option will be exercised by notary deed in 2017.

Ailanthus NV has granted another loan at fixed interest rate of 4.23% which matures in 2025. The purpose of the loan is to finance the purchase of a building in France. The amounts outstanding as of December 31, 2016 is K€266 (2015: K€290; 2014: K€313). The interest expense for the year 2016 is K€12 (2015: K€13; 2014: K€14) and is included in the “other loans” in the above table.

Finance lease obligations with third parties

The Group has several finance lease obligations mainly with financial institutions and related to the financing of buildings and various other items of plant and equipment such as 3D printers.

15 Other non-current liabilities

The other non-current liabilities consist of the following:

	For the year ended December 31		
in 000€	2016	2015	2014
Written-put option Rapidfit+	735	673	638
Contingent consideration	909	1,310	—
Advances received on contracts	—	81	93
Provisions	69	53	169
Other	160	127	69
Total	**1,873**	**2,244**	**969**

We refer to Note 12 for a description of the written-put options Rapidfit+.

The contingent consideration of K€909 at 31 December 2016 (2015: K€1,310) relates to the business combination of CENAT.

The impact of the accounting treatment of the Belgian contribution plans with a minimal guarantee is not material as only a limited number of people can benefit. No provisions have been recognized as of 31 December 2016, 2015 and 2014. As such, no further disclosures have been provided.

16 Deferred income

Deferred income consists of the following:

	For the year ended December 31		
in 000€	2016	2015*	2014*
Deferred maintenance & license	16,799	13,136	9,521
Deferred (project) fees	4,134	2,738	2,105
Deferred government grants	419	703	593
Other	58	24	200
Total	**21,410**	**16,601**	**12,419**
of which current	17,822	14,696	10,449
non-current	3,588	1,905	1,970

* The years 2015 and 2014 have been restated to reflect the reclassification of the long-term deferred income. We refer to Note 2 for more information.

The deferred maintenance and license consist of maintenance fees paid up-front which are deferred and amortized over the maintenance period.

The deferred (project) fees consist of one-time and advance payments received which are deferred over the contractual period.

The deferred government grants relate to grants received from the government mainly in relation to research projects. The grants are recognized as income under “other operating income”.

17 Other current liabilities

Other current liabilities include the following:

	For the year ended December 31		
in 000€	2016	2015	2014
Payroll-related liabilities	7,873	7,162	5,827
Non-income tax payables	694	913	988
Accrued charges	946	645	837
Advances received	581	338	503
Other current liabilities	53	154	502
Total	**10,147**	**9,212**	**8,657**

18 Fair value

Financial assets

The carrying value and fair value of the financial assets for 31 December 2016, 2015 and 2014 can be presented as follows:

	Carrying value			Fair value		
in 000€	2016	2015	2014	2016	2015	2014
Financial assets						
Loans and receivables measured at amortized cost						
Trade receivables (current)	27,479	22,843	18,370	27,479	22,843	18,370
Other financial assets (non-current)	388	356	328	388	356	328
Other current assets	2,312	1,751	3,540	2,312	1,751	3,540
Cash & cash equivalents	55,912	50,726	51,019	55,912	50,726	51,019
Total loans and other receivables	**86,091**	**75,676**	**73,257**	**86,091**	**75,676**	**73,257**
Held to maturity investments	—	—	10,000	—	—	10,005
Total held-to-maturity investment	**—**	**—**	**10,000**	**—**	**—**	**10,005**

The fair value of the financial assets has been determined on the basis of the following methods and assumptions:

- The carrying value of the cash and cash equivalents and the current receivables approximate their fair value due to their short term character;
- The fair value of the held to maturity investments is calculated as the present value of the interest income and nominal amount using the interest rates applicable at reporting date (level 2 inputs);
- Other current financial assets such as current other receivables are being evaluated on the basis of their credit risk and interest rate. Their fair value is not different from their carrying value on 31 December 2016, 2015 and 2014

Financial liabilities:

The carrying value and fair value of the financial liabilities for 31 December 2016, 2015 and 2014 can be presented as follows:

in 000€	Carrying value			Fair value		
	2016	2015	2014	2016	2015	2014
Financial liabilities measured at amortized cost						
Loans & Borrowings	33,806	21,089	17,347	34,619	21,449	17,761
Trade payables	13,400	9,712	7,205	13,400	9,712	7,205
Other liabilities	794	1,345	2,004	794	1,345	2,004
Total financial liabilities measured at amortized cost	**48,000**	**32,146**	**26,556**	**48,813**	**32,506**	**26,970**
Financial liabilities measured at fair value						
Contingent consideration	909	1,310	—	909	1,310	—
Written put option on NCI	735	673	638	735	673	638
Total financial liability measured at fair value	**1,644**	**1,983**	**638**	**1,644**	**1,983**	**638**
Total non-current	30,071	18,851	12,817	30,714	19,259	13,284
Total current	19,573	15,278	14,377	19,743	15,230	14,324

The fair value of the financial liabilities has been determined on the basis of the following methods and assumptions:

- The carrying value of current liabilities approximates their fair value due to the short term character of these instruments;
- Loans and borrowings are evaluated based on their interest rates and maturity date. Most interest bearing debts have fixed interest rates and their fair value is subject to changes in interest rates and individual creditworthiness. The interest-free loans have already been recognized initially at fair value based on a present value technique (level 2 inputs) and are subsequently measured at amortized cost. Their carrying value approximates their fair value.
- The fair value of the written put option on non-controlling interest has been determined based on the present value of the redemption amount (level 3 inputs).
- The fair value of the contingent consideration has been determined based on the latest long-term business plans of the Cenat business (level 3 inputs).

Fair value hierarchy

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

- Level 1: quoted (unadjusted) prices in active markets for identical assets and liabilities;
- Level 2: other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly; and
- Level 3: techniques which use inputs that have a significant effect on the recorded fair value that are not based on observable market data.

The Group has no financial instruments carried at fair value in the statement of financial position on 31 December 2016, 2015 and 2014 except for a call option and written put option on non-controlling interest and the contingent consideration for the acquisition of Cenat:

- The fair value of the written put option is determined based on the present value of the redemption amount and is considered level 3. The redemption amount is a formula (see Note 12) and is estimated on historical financial figures. The impact on the income statement is K€50 during 2016 (2015: K€35 ; 2014: K€25).

- The fair value of the call option is estimated at zero as the call option is deeply out of the money (see Note 12).
- The fair value of the contingent consideration is estimated based on the current business plans of Cenat and is primarily dependent on achieving certain targets based on future hardware revenue and productions cost level. The fair value of this contingent consideration was initially estimated at K€1,310 (31 December 2015). A fair value adjustment was recognized in 2016 bringing tthe fair value of the contingent consideration to K€909 per 31 December 2016 (see Note 4). A decrease (increase) of the future hardware revenue by an average of 10% assuming stable production cost, would result in a decrease (increase) of the fair value by K€40 (K€39). Higher (lower) production costs by an average of 10% assuming stable hardware sales would result in a decrease (increase) of the fair value by K€7 (K€7).

19 Segment information

For management purposes, the Group is organized into segments based on their products, services and industry and has the following three reportable segments:

- The Materialise Medical segment, which develops and delivers medical software solutions, medical devices and other related products and services;
- The Materialise Software segment, which develops and delivers additive manufacturing software solutions and related services; and
- The Materialise Manufacturing segment, which delivers 3D printed products and related services.

The measurement principles used by the Group in preparing this segment reporting are also the basis for segment performance assessment and are in conformity with IFRS. The Chief Executive Officer of the Group acts as the chief operating decision maker. As a performance indicator, the chief operating decision maker controls the performance by the Group's revenue and EBITDA. EBITDA is defined by the Group as net profit plus finance expenses, less financial income plus income taxes, plus depreciation, amortization and impairment.

The following table summarizes the segment reporting for each of the reportable periods ending 31 December. Corporate research and development, headquarters' function, financing and income taxes are managed on a Group basis and are not allocated to operating segments. As management's controlling instrument is mainly revenue-based, the reporting information does not include assets and liabilities by segment and is as such not available per segment.

in 000€	Materialise Software	Materialise Medical	Materialise Manufact-uring	Total segments	Adjust-ments & elimi-nations	Consoli-dated
For the year ended 31 December, 2016						
Revenues	30,122	37,910	46,406	114,438	39	114,477
Segment EBITDA	10,130	894	3,848	14,872	(6,391)	8,481
Segment EBITDA %	33.6%	2.4%	8.3%	13.0%		7.4%
For the year ended 31 December, 2015						
Revenues	25,798	34,856	41,381	102,035	—	102,035
Segment EBITDA	9,093	422	1,645	11,160	(8,239)	2,921
Segment EBITDA %	35.2%	1.2%	4.0%	10.9%		2.9%
For the year ended 31 December, 2014						
Revenues	18,095	30,034	33,222	81,351	4	81,355
Segment EBITDA	6,586	2,917	1,144	10,647	(5,752)	4,895
Segment EBITDA %	36.4%	9.7%	3.4%	13.1%		6.0%

The segment EBITDA is reconciled with the consolidated net profit (loss) of the year as follows:

in 000€	For the year ended 31 December, 2016	2015	2014
Segment EBITDA	**14,872**	**11,160**	**10,647**
Depreciation, amortization and impairment	(8,374)	(6,810)	(4,565)
Corporate research and development	(1,673)	(2,955)	(2,487)
Corporate headquarter costs	(8,646)	(9,700)	(6,573)
Other operating income (expense)	3,928	4,416	3,308
Operating (loss) profit	**107**	**(3,889)**	**330**
Financial expenses	(2,437)	(2,470)	(1,150)
Financial income	2,039	3,511	3,160
Income taxes	(1,710)	389	(387)
Share in loss of joint venture	(1,018)	(401)	(81)
Net (loss) profit	**(3,019)**	**(2,860)**	**1,872**

Entity-wide disclosures

We refer to the Note 20.1 for the revenue by geographical area, based on location of the customer. The total revenue realized in the country of domicile (Belgium) in 2016 amounts to K€7,534 (2015: K€7,202; 2014: K€6,746).

The total non-current assets, other than financial instruments, deferred tax assets and tax credits, by geographical area is as follows:

in 000€	For the year ended 31 December, 2016	2015
United States of America (USA)	4,697	5,032
Americas other than USA	35	13
Europe (without Belgium)	23,984	22,436
Belgium	34,074	30,315
Asia	898	943
Total	**63,688**	**58,739**

The totals of the above table includes goodwill, intangible assets, property, plant & equipment and investments in joint ventures as disclosed in the consolidated statements of financial position.

Please note that for the period ending December 31, 2014 the information is not available.

20 Income and expenses

20.1 Revenue

Revenue by geographical area is presented as follows:

	For the year ended December 31		
in 000€	2016	2015	2014
United States of America (USA)	29,267	29,400	24,478
Americas other than USA	1,537	1,590	1,033
Europe	67,883	58,939	47,358
Asia	15,790	12,106	8,486
Total	**114,477**	**102,035**	**81,355**

The Group has no customers (2015: none; 2014: one (within medical segment)) with individual sales larger than 10% of the total revenue. In previous years, one customer represented 11.3% of total revenue in 2014.

The revenue by category is presented as follows:

	For the year ended December 31		
in 000€	2016	2015	2014
Software licenses	38,071	20,068	14,483
Software services	5,159	19,188	11,828
Clinical devices	18,315	14,556	14,675
Clinical services	1,908	3,098	1,510
Printed parts	46,445	39,651	32,511
Royalties and other fees	4,579	5,474	6,348
Total	**114,477**	**102,035**	**81,355**

20.2 Cost of sales

Cost of sales include the following selected information:

	For the year ended December 31		
in 000€	2016	2015	2014
Purchase of goods and services	(25,374)	(25,203)	(18,739)
Amortization and depreciation	(5,007)	(3,173)	(2,624)
Payroll expenses	(16,161)	(14,524)	(10,910)
Other expenses	(164)	(63)	(123)
Total	**(46,706)**	**(42,963)**	**(32,396)**

20.3 Research and development expenses

Research and development expenses include the following selected information:

in 000€	2016	2015	2014
Purchase of goods and services	(3,177)	(2,176)	(3,042)
Amortization and depreciation	(478)	(1,047)	(702)
Payroll expenses	(13,985)	(14,874)	(11,279)
Other	(42)	(89)	(70)
Total	**(17,682)**	**(18,186)**	**(15,093)**

20.4 Sales and marketing expenses

Sales and marketing expenses include the following selected information:

	For the year ended December 31		
in 000€	2016	2015	2014
Purchase of goods and services	(7,450)	(8,330)	(6,339)
Amortization and depreciation	(563)	(1,108)	(436)
Payroll expenses	(27,828)	(26,655)	(20,173)
Other	(312)	(739)	(595)
Total	**(36,153)**	**(36,832)**	**(27,543)**

20.5 General and administrative expenses

General and administrative expenses include the following selected information:

	For the year ended December 31		
in 000€	2016	2015	2014
Purchase of goods and services	(5,488)	(3,774)	(2,748)
Amortization and depreciation	(2,326)	(1,482)	(803)
Payroll expenses	(11,895)	(9,270)	(7,872)
Other	(332)	(519)	(222)
Total	**(20,041)**	**(15,045)**	**(11,645)**

20.6 Net other operating income (expense)

The net other operating income (expense) can be detailed as follows:

	For the year ended December 31		
in 000€	2016	2015	2014
Government grants	4,181	4,788	3,632
Capitalized expenses (asset construction)	12	693	749
Net foreign currency exchange gains / (losses)	452	361	518
Tax Credits	741	588	—
Other	826	672	753
Total	**6,212**	**7,102**	**5,652**

The Company has received government grants from the Belgian federal and regional governments and from the European Community in the forms of grants linked to certain of its research and development programs and reduced payroll taxes.

Any government grants recognized as income do not have any unfulfilled conditions or other contingencies attached to them.

20.7 Payroll expenses

The following table shows the breakdown of payroll expenses for 2016, 2015 and 2014:

	For the year ended December 31		
in 000€	2016	2015	2014
Short-term employee benefits	(50,714)	(48,372)	(37,192)
Social security expenses	(10,136)	(9,076)	(7,255)
Expenses defined contribution plans	(388)	(758)	(627)
Other employee expenses	(8,631)	(7,117)	(5,159)
Total	**(69,869)**	**(65,323)**	**(50,234)**
Total registered employees at the end of the period	1,432	1,304	1,100

20.8 Financial expenses

Financial expenses includes the following selected information:

	For the year ended December 31		
in 000€	2016	2015	2014
Interest expense	(665)	(615)	(606)
Foreign currency losses	(1,453)	(1,568)	(119)
Other financial expenses	(319)	(287)	(425)
Total	**(2,437)**	**(2,470)**	**(1,150)**

20.9 Financial income

Financial income includes the following selected information:

	For the year ended December 31		
in 000€	2016	2015	2014
Foreign currency exchange gains	1,853	3,098	2,900
Amortization discount interest free loans	14	40	62
Other finance income	172	373	198
Total	**2,039**	**3,511**	**3,160**

20.10 Income taxes

Current income tax

The following table shows the breakdown of the tax expense for 2016, 2015 and 2014:

	For the year ended December 31		
in 000€	2016	2015	2014
Estimated tax liability for the period	(1,698)	(373)	(197)
Tax adjustments to the previous period	—	—	—
Deferred income taxes	(12)	762	(190)
Total tax income (loss) for the period	**(1,710)**	**389**	**(387)**

The current tax expense is equal to the amount of income tax owed to the tax authorities for the year, under the applicable tax laws and rates in effect in the various countries.

Deferred tax

Deferred tax is presented in the statement of financial position under non-current assets and non-current liabilities, as applicable. The following table shows the breakdown of the deferred tax assets, deferred tax liability and the deferred tax expense for 2016, 2015 and 2014:

in 000€	2016	2015	2014	2016	2015	2014
Tax losses, notional interest deduction and other tax benefits	109	906	58			
Amortization development assets and other intangible assets	227	186	170			
Deferred revenue	—	—	4			
Depreciation property, plant & equipment	—	—	—			
Borrowing cost	—	—	—			
Financial leasings	—	—	—			
Inventory	—	—	—			
Other non-current assets	—	—	—			
Total deferred tax assets	**336**	**1,092**	**232**	**(756)**	**860**	**(174)**
Property, plant & equipment	(452)	(363)	(277)			
Intangible assets	(873)	(1,705)	(1,281)			
Tax losses, notional interest deduction and other tax benefits	—	—	229			
Total deferred tax liabilities	**(1,325)**	**(2,068)**	**(1,329)**	**744**	**(98)**	**(16)**
Total deferred tax income (loss)				(12)	762	(190)

The Group has unused tax losses, tax credits and notional interest deduction available in an amount of K€9,451 for 2016 (2015:K€12,231 ; 2014:K€10,293) of which K€1,570 for 2016 (2015:K€2,009 ; 2014: K€3,634) relating to Materialise NV. A total of K€315 in 2016 (2015:K€402 ; 2014:K€338) relates to unused notional interest deduction with an expiration date of 31 December 2018.

With respect to the net operating losses of Materialise NV, no deferred tax assets, have been recognized given that it in view of the Belgian Patent Income Deduction there is an uncertainty as to what extend these tax losses will be used in future years. The Belgian Patent Income Deduction allows companies to deduct 80% of the qualifying gross patent income from the taxable basis. Currently the Company is preparing a detailed analysis of its tax situation and tax planning. Once this analysis has been finalized, the Company will determine the basis on which to reassess the need for a valuation allowance on the deferred tax assets.

With respect to the net tax losses of the other entities in the Group, no deferred taxes have been recognized in 2016 except for K€109 (2015:K€906 ; 2014:K€58), given that it is unclear whether there will be a positive taxable base in the near future for the other entities with fiscal losses.

Relationship between Tax Expense and Accounting Profit

	For the year ended December 31		
in 000€	**2016**	**2015**	**2014**
Profit (loss) before tax	(1,309)	(3,249)	2,259
Income tax at statutory rate of 33,99%	445	1,104	(768)
Effect of different local tax rate	663	445	105
Tax adjustments to the previous period	—	—	—
Non-deductible expenses	(453)	(394)	(275)
Capitalized initial public offering transaction costs	—	—	308
Research and development tax credits & patent income deduction	3,664	1,872	1,316
Notional interest deduction Belgium	351	365	—
Non recognition of deferred tax asset	(6,767)	(4,510)	(1,206)
Recognition of deferred tax assets on previous years tax losses	—	742	—
Non-taxable income	729	—	—
Use of previous years tax losses and tax credits for which no deferred tax assets was recognized	50	693	—
Taxes on other basis	(342)	—	—
Other	(50)	72	133
Income tax expense as reported in the consolidated income statement	**(1,710)**	**389**	**(387)**

21 Earnings per share

Basic earnings per share amounts are calculated by dividing the net profit (loss) of the year attributable to ordinary equity holders of the parent company by the weighted average number of ordinary shares outstanding during the year.

Diluted earnings per share amounts are calculated by dividing the net profit (loss) attributable to ordinary equity holder of the parent company by the weighted average number of ordinary shares outstanding during the year plus the weighted average number of ordinary shares that would be issued on conversion of all warrants.

The net profit (loss) of the year used for the basic and diluted earnings per share are reconciled as follows:

	For the year ended December 31		
in 000€	2016	2015	2014
Net profit attributable to ordinary equity holders of the parent for basic earnings	**(3,019)**	**(2,807)**	**2,061**
Interest on convertible bonds	—	—	—
Net profit attributable to ordinary equity holders of the parent adjusted for the effect of dilution	**(3,019)**	**(2,807)**	**2,061**

The convertible bond and the warrants are anti-dilutive as per 31 December 2016 and as such has not been considered for adjusting the net profit. We refer to Notes 13 and 14 for information on the number of instruments that could potentially be dilutive but which were not considered in the calculation above.

The following reflects the share data used in the basic and diluted earnings per share computations:

	For the year ended December 31		
in 000€	2016	2015	2014
Weighted average number of ordinary shares for basic earnings per share	**47,325**	**47,224**	**43,118**
Effect of dilution:			
Share options	—	—	170
Convertible loan	—	—	—
Weighted average number of ordinary shares adjusted for effect of dilution	**47,325**	**47,224**	**43,288**

The earnings per share are as follows:

	For the year ended December 31		
	2016	2015	2014
Earnings per share attributable to ordinary owners of the parent			
Basic	(0.06)	(0.06)	0.05
Diluted	(0.06)	(0.06)	0.05

22 Commitments and contingent liabilities

Operating lease commitments

The Group has operating lease commitments mainly related to buildings and cars as follows:

	For the year ended December 31		
in 000€	2016	2015	2014
Within 1 year	2,012	908	1,138
Between 2 and 3 years	1,964	1,074	919
Between 4 and 5 years	561	541	34
More than 5 years	84	15	—
Total	**4,621**	**2,538**	**2,091**

The total lease payments recognized in the consolidated income statement are K2,451 in 2016 (2015: K€1,165; 2014: K€1,188). Per January 1, 2017 the Group has refinanced operating car lease commitments into financial lease commitments for an amount of K€1,699. These commitments are not included in the above schedule, nor in the below finance lease commitments overview.

Finance lease commitments

The Group has finance leases for the building and various other items of plant and equipment. Future minimum lease payments under finance lease with the present value of the net minimum lease payments are as follows:

	31 December 2016		31 December 2015		31 December 2014	
in 000€	Minimum lease payments	Present value of payments	Minimum lease payments	Present value of payments	Minimum lease payments	Present value of payments
Within one year	2,400	2,287	1,769	1,682	2,077	2,048
Between two and three years	3,640	3,503	4,345	3,968	1,595	1,468
Between four and five years	1,206	1,057	261	254	784	703
More than five years	587	548	—	—	—	—
Total	**7,833**	**7,395**	**6,375**	**5,904**	**4,456**	**4,219**
Less finance charges	(438)	—	(471)	—	(237)	—
Present value of minimum lease payments	7,395	7,395	5,904	5,904	4,219	4,219

Mortgages and pledges

The Group has several loans secured by a mortgage on the building. The carrying value of related property, plant & equipment is K€12,594 (2015: K€7,479; 2014 K€7,906). The total outstanding mortgages and pledges are K€32,362 in 2016 (2015: K€12,028; 2014: K€12,147).

Included in the above, the Group also has pledges on the business goodwill ("fonds de commerce") of the Company for a total amount of K€4,491 in 2015 (2015: K€3,491; 2014: K€3,491).

Other commitments

The Group has outstanding non-cancellable contracts with a future commitment of K€1,290 at 31 December 2016 (2015: K€288; 2014: K€196). For property, plant & equipment, we have committed expenditures of K€10,204 as per 31 December 2016 (2015: K€505; 2014: nil). These commitments relate to the construction of the new buildings in Belgium and Poland.

Contingent liabilities

The Group is currently involved in a legal proceeding with Dentsply Implants NV regarding the alleged wrongful termination of a supply agreement between the Company and Dentsply Implants NV entered into in 2010. The court of first instance ruled, in favor of Dentsply Implants NV, that we have wrongfully terminated the relationship. We have appealed this decision before the court has pronounced itself on the monetary damages. The amount of damages which Dentsply Implants NV is claiming is €2.7 million. While we are confident about the chances that the first instance decision will be overruled, we believe that, in the event that the first instance decision would be confirmed, the amount of monetary damages that we would be exposed to, will not have a material impact in our business, financial conditions or result of operations. We are currently not a party to, and we are not aware of any threat of, any other legal proceedings, which, in the opinion of our management, is likely to have or could reasonably possibly have a material adverse effect on our business, financial condition or results of operations.

23 Risks

The Group is mainly exposed to liquidity risk, interest rate risk and credit risk

Foreign exchange risk

The Group has primarily exposure to the USD as foreign currency. During 2016, 2015 and 2014 the changes in the USD did not have a significant impact on the operating profit of the Group.

During 2016 the USD impact on the cash and term accounts held in USD funded through the initial public offering proceeds was positive for an amount of K€320.

If the USD (rate for 1 EUR) would have appreciated by 10%, the net result would have been K€1,006 lower, excluding the effect of the cash and term accounts held in USD. If the USD (rate for 1 EUR) would have depreciated by 10%, the net result would have been K€823 higher, excluding the effect of the cash and term accounts held in USD

Liquidity risk

The liquidity risk is that the Group may not have sufficient cash to meet its payment obligations. This risk is countered by day-by-day liquidity management at the corporate level. The Group has historically entered into financing and lease agreements with financial institutions to finance significant projects and certain working capital requirements. The Group still has undrawn lines of credit totaling K€3,063 at 31 December 2016 (2015: K€4,355; 2014: K€4,320).

These line of credit arrangements do not contain significant financial covenants.

The range of contracted obligations and related carrying amounts are as follows:

in 000€	< 1 year	2 to 3 years	4-5 years	> 5 years	Total
At 31 December, 2016					
Loan & borrowings	6,050	10,787	7,471	12,620	36,928
Trade payables	13,400	—	—	—	13,400
Other current liabilities	794	—	—	—	794
Total	**20,244**	**10,787**	**7,471**	**12,620**	**51,122**

	< 1 year	2 to 3 years	4-5 years	> 5 years	Total
At 31 December, 2015					
Loan & borrowings	4,691	10,989	4,187	3,230	23,097
Trade payables	9,712	—	—	—	9,712
Other current liabilities	1,345	—	—	—	1,345
Total	**15,748**	**10,989**	**4,187**	**3,230**	**34,154**

	< 1 year	2 to 3 years	4-5 years	> 5 years	Total
At 31 December, 2014					
Loan & borrowings	4,885	5,221	3,498	5,568	19,172
Trade payables	7,205	—	—	—	7,205
Other current liabilities	2,004	—	—	—	2,004
Total	**14,094**	**5,221**	**3,498**	**5,568**	**28,381**

Interest rate risk

The Group has loans outstanding primarily with a fixed interest rate and is, therefore, not subject to immediate changes in interest rates.

Credit risk

Credit risk is the risk that third parties may not meet their contractual obligations resulting in a loss for the Group. The Group is exposed to credit risk from its operating activities and from its financing activities, which are mainly deposits with financial institutions. The Group limits this exposure by contracting with credit-worthy business partners or with financial institutions which meet high credit rating requirements. In addition, the portfolio of receivables is monitored on a continuous basis. Credit risk is limited to a specified amount with regard to individual receivables.

The following is an aging schedule of trade receivables:

in 000€	Total	Non-due	< 30 days	31-60 days	61-90 days	91-180 days	> 181 days
31 December, 2016	27,479	15,590	6,434	1,885	490	2,008	1,072
31 December, 2015	22,843	15,104	3,402	1,348	814	1,057	1,118
31 December, 2014	18,370	11,946	3,144	1,197	558	1,094	431

Capital management

The primary objective of the Group's shareholders' capital management strategy is to ensure it maintains healthy capital ratios to support its business and maximize shareholder value. Capital is defined as the Group shareholder's equity.

The Group consistently reviews its capital structure and makes adjustments in light of changing economic conditions. The Group made no changes to its capital management objectives, policies or processes during the years ended 31 December 2016, 2015 and 2014.

24 Related party transactions

The compensation of key management personnel of the Group is as follows:

	For the year ended December 31		
in 000€	2016	2015	2014
Short-term employee benefits	2,693	2,638	2,636
Post-employment benefits	116	109	93
Termination benefits	—	22	118
Total	**2,809**	**2,769**	**2,847**
Warrants granted	199,500	18,180	307,160
Warrants outstanding	790,752	593,448	673,756

The amounts disclosed in the table are the amounts recognized as an expense during the reporting period related to key management personnel.

The following table provides the total amount of transactions that have been entered into with related parties for the relevant financial year:

in 000€	Sale of goods to	Purchases from	Interest expense	Receivables	Liabilities
Non-executive director's of the Group					
2016	—	72	50	—	972
2015	—	99	12	—	932
2014	—	52	11	—	920
Shareholders of the Group					
2016	—	117	16	—	378
2015	—	214	18	—	447
2014	25	264	20	—	1,514
Joint ventures					
2016	527	—	—	601	—
2015	547	—	—	189	—
2014	595	—	—	200	—

Related party – Ailanthus NV

Ailanthus NV, shareholder and director of the Group, has provided several loans and financial leases to the Group for the purchase of machinery and a portion of the office and production buildings. We refer to Note 14 for details.

The Group rent apartments on a regular basis from Ailanthus NV in order to host our employees from foreign subsidiaries who are visiting our headquarters in Leuven. The total amount paid to Ailanthus NV for rent in 2016 was K€141 (2015: K€167; 2014: K€168).

Related party – Convertible debt

The Group has issued on 28 October 2013 1,000 convertible bonds for a total amount of K€1,000. The bonds have been fully subscribed by a member of our senior management. We refer to Note 14 for more details.

Founder shares

At the inception of the Company, the other shareholders granted a total of 300,000 founder shares ("oprichtersaandelen") to the founder and CEO of the Group, Mr. Wilfried Vancraen, in his capacity as shareholder. In accordance with Belgian Company Law, these founder shares do not represent shareholders' capital but grant the holder voting and dividend rights. No other terms and conditions were attached to these founder shares and no dividends has been paid by the Group to the shareholders since inception.

The General Meeting of Shareholders held at 28 November 2013 converted the 300,000 founder shares to ordinary A shares. Converting the founder shares into ordinary A Shares did not confer any substantial advantage to their holder but resulted in a dilution for the existing shareholders by 3,07%. Those A shares will benefit from all rights attached to the ordinary shares.

25 Events subsequent to the statement of financial position date

There are no significant events subsequent to the statement of financial position date that would require adjustments or disclosures to the financial statements.

26 Overview of consolidated entities

Name	Country of incorporation	% equity interest			
		2016	2015	2014	2013
Materialise NV	Belgium	100%	100%	100%	100%
Materialise France SAS	France	100%	100%	100%	100%
Materialise GmbH	Germany	100%	100%	100%	100%
Materialise Japan K.K.	Japan	100%	100%	100%	100%
Materialise Czech Republic SRO	Czech Republic	100%	100%	100%	100%
Materialise USA, LLC	United States	99%	99%	99%	99%
Materialise UK Limited	United Kingdom	100%	100%	100%	100%
OBL SAS	France	100%	100%	100%	100%
Materialise Austria GmbH	Austria	100%	100%	100%	100%
Mobelife NV (liquidated)	Belgium	—	100%	77.7%	80.6%
Materialise NY LLC (liquidated)	United States	—	—	—	100%
Marcam (merged with Materialise GmbH)	Germany	—	100%	100%	100%
Materialise Malaysia SDN. Bhd.	Malaysia	100%	100%	100%	100%
Materialise Ukraine LLC	Ukraine	100%	100%	100%	100%
RapidFit NV	Belgium	83.3%	83.3%	83.3%	83.3%
RapidFit, LLC	United States	83.3%	83.3%	83.3%	83.3%
Meridian Technique Limited	United Kingdom	100%	100%	100%	—
OrthoView, LLC	United States	100%	100%	100%	—
OrthoView Holdings Limited	United Kingdom	100%	100%	100%	—
Meridian (Corporate Trustee) Limited	United Kingdom	100%	100%	100%	—
OrthoView Limited	United Kingdom	100%	100%	100%	—
Materialise SA	Poland	100%	100%	100%	—
Materialise Colombia SAS	Colombia	100%	100%	100%	—
RSPRINT powered by Materialise NV (joint venture)	Belgium	50.0%	50.0%	50.0%	—
Materialise Shanghai Co.Ltd	China	100%	100%	100%	—
Cenat bvba (merged with Materialise NV)	Belgium	—	100%	—	—
Mat Metal bvba (liquidated)	Belgium	—	100%	—	—
Elbimmo NV (merged with Materialise NV)	Belgium	—	100%	—	—
Rapidfit Holding LLC (liquidated)	United States	—	100%	—	—
Materialise Australia PTY Ltd	Australia	100%	—	—	—
Materialise S.R.L.	Italy	100%	—	—	—

EXHIBIT 8.1

SUBSIDIARIES OF MATERIALISE NV

Name	Jurisdiction of Incorporation
Materialise France SAS	France
Materialise GmbH	Germany
Materialise Japan K.K.	Japan
Materialise Czech Republic SRO	The Czech Republic
Materialise USA, LLC	USA – Michigan
Materialise UK Limited	United Kingdom
OBL SAS	France
Materialise Austria GmbH	Austria
Materialise Malaysia SDN. Bhd.	Malaysia
Materialise Ukraine LLC	Ukraine
RapidFit NV	Belgium
RapidFit, LLC	USA – Michigan
Materialise SA	Poland
Meridian Technique Limited	United Kingdom
OrthoView, LLC	USA – Delaware
OrthoView Holdings Ltd.	United Kingdom
Meridian (Corporate Trustee) Limited	United Kingdom
OrthoView Limited	United Kingdom
Materialise Colombia SAS	Colombia
RSPRINT powered by Materialise NV	Belgium
Materialise Shanghai Co. Ltd.	China
Materialise Australia PTY Ltd	Australia
Materialise S.R.L.	Italy

EXHIBIT 12.1

CERTIFICATION

I, Wilfried Vancraen, certify that:

1. I have reviewed this annual report on Form 20-F of MATERIALISE NV (the "company");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements and other financial information included in this report fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 28, 2017

By: /s/ Wilfried Vancraen
Wilfried Vancraen
Chief Executive Officer

EXHIBIT 12.2

CERTIFICATION

I, Johan Albrecht, certify that:

1. I have reviewed this annual report on Form 20-F of MATERIALISE NV (the "company");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements and other financial information included in this report fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 28, 2017

By: /s/ Johan Albrecht
Johan Albrecht
Alfinco BVBA
Chief Financial Officer

EXHIBIT 13.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE U.S. SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of MATERIALISE NV (the "Company") on Form 20-F for the fiscal year ended December 31, 2016, as filed with the U.S. Securities and Exchange Commission on the date hereof (the "Report"), I, Wilfried Vancraen, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the U.S. Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(i) the Report fully complies with the requirements of section 13(a) or 15(d) of the U.S. Securities Exchange Act of 1934, as amended; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 28, 2017

By: /s/ Wilfried Vancraen
Wilfried Vancraen
Chief Executive Officer

EXHIBIT 13.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE U.S. SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of MATERIALISE NV (the "Company") on Form 20-F for the fiscal year ended December 31, 2016, as filed with the U.S. Securities and Exchange Commission on the date hereof (the "Report"), I, Johan Albrecht, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the U.S. Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(i) the Report fully complies with the requirements of section 13(a) or 15(d) of the U.S. Securities Exchange Act of 1934, as amended; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 28, 2017

By: /s/ Johan Albrecht
Johan Albrecht
Alfinco BVBA
Chief Financial Officer

EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

Materialise NV
Leuven, Belgium

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-197236 and No. 333-212445) and Form F-3 (No. 333-213649) of Materialise NV of our report dated April 28, 2017, relating to the consolidated financial statements which appears in this Annual Report on Form 20-F. Our report contains an explanatory paragraph relating to the Company's restatement of its consolidated financial statements as described in Note 2 to the consolidated financial statements.

BDO Bedrijfsrevisoren Burg. CVBA
On behalf of it,

Bert Kegels
/s/ Bert Kegels

Zaventem, Belgium
April 28, 2017