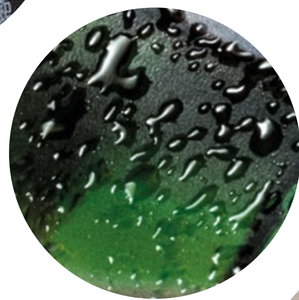
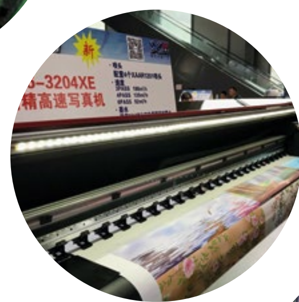




XAAR®

Leading the digital inkjet revolution

Xaar plc
Annual Report and
Financial Statements 2017

WE ARE XAAR

What we do

We are a world leader in the development of digital inkjet technology. Our technology drives the conversion of analogue printing and manufacturing methods to digital inkjet which is more efficient, more economical and more productive than the traditional methods which have been in use for years. We design and manufacture printheads as well as systems for product decoration and 3D Printing which use our inkjet technology.

Play video

Why we do it

Our purpose is simple – it is to improve supply chain efficiency and to unlock innovation. With Xaar technology our customers and their customers are able to innovate in their manufacturing methods and their products as well as benefit from a shorter supply chain; they can implement more precise and efficient processes, easily produce short batches, take products to market quicker, improve productivity, reduce waste and unlock creativity.

Why we are different

We are the only truly independent inkjet technology company with over 25 years of know how. We offer unrivalled inkjet expertise including technology and printhead design and development, and manufacture highly customised product decoration systems and industrial 3D Printing for volume manufacturing. Our unique technologies and products are the leading enabler for innovation and for driving supply chain efficiencies for many industries.

Our open systems approach delivers more choice to our customers and also encourages market conversion from analogue to digital processes. Our independence enables a flexible, collaborative approach to ensure we focus on our customers' goals.

XAAR'S MISSION

Leading the digital inkjet revolution

Technology

For over 25 years, Xaar has developed leading-edge technologies which have helped companies around the world innovate and also improve their supply chain efficiencies. A recent example of our innovation is High Laydown (HL) Technology which facilitates the printing of highly viscous fluids whilst also enabling outstanding rates of productivity – important for industrial 3D Printing. In addition, HL Technology can be used to deposit high build varnish for tactile effects that enhance shelf appeal for a wide range of packaging and labels as well as for more creative ceramic tile designs.

Play video

Products

We offer a comprehensive range of products including industrial inkjet printheads, product decoration systems and industrial 3D Printing systems. We also develop and sell ink systems and electronics, and provide fluid optimisation services to accelerate inkjet system development and adoption.

Applications

Many industry sectors use Xaar technology and products in order to innovate and to drive efficiencies. These include sectors such as Advanced Manufacturing, industrial 3D Printing, Packaging, Graphic Arts, Textiles and Ceramics.

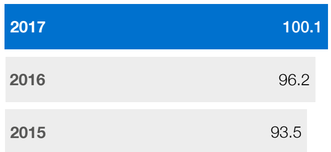
Get app

HIGHLIGHTS

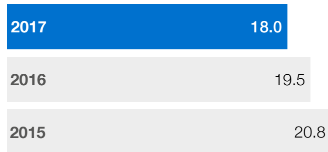
Positioned for growth

Our balanced and diversified product portfolio now serves multiple market sectors, including 3D and Product Printing. Broader product range and new partnerships underpin our growth opportunities, which are core to our transformation. Our strategy is focused on supporting customers by improving supply chain efficiency and unlocking innovation.

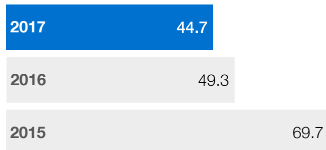
Revenue £m
£100.1m



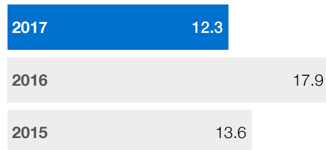
Adjusted profit before tax £m
£18.0m



Net cash[1] balance £m
£44.7m



Profit before tax £m
£12.3m



Strategic and operational highlights

- In 2017 revenues from the seven new products launched in the last 24 months and the acquired Engineered Printing Solutions (EPS) business accounted for 80% of the total product revenue (2016: 48%)
- Strong performance from the new 1201 Thin Film printhead, including a master distribution agreement signed for two years for 90,000 printheads
- Good progress on 5601 Thin Film printhead. Design frozen; first development kits shipped to eight partners; four colour print capabilities showcased at InPrint 2017
- Realised the first revenues from the Textiles market, largely from our 5501 bulk printhead product
- Announcement of the Joint Development Agreement (JDA) with Xerox to develop the next generation of industrial bulk piezo printheads using the extensive resources and IP of both companies
- Demonstrated to a small select group of partners and potential customers the first prototype Xaar 3D printer
- Organisational restructure to strengthen our Go-To-Market capabilities.

Financial highlights

- Total revenue grew by 4% in 2017 to £100.1 million (2016: £96.2 million)
- JPY 2.98 billion (circa £20.0 million) royalty upgrade and replacement agreement signed with Seiko Instruments Inc. (SII), £10.0 million of which is recognised as revenue in 2017 with the first payment of JPY 1.5 billion received in December 2017 and the final JPY 1.48 billion received in Q1 2018
- Product revenues increased by £0.9 million with the continued slowdown of sales into ceramic tile decoration being offset by 23% growth in other sectors
- Adjusted operating profit margin of 18% achieved for the year (2016: 20%) helped by £9.5 million from the one-off SII royalty (see Financial Statements, note 4); underlying adjusted profit before tax in line with expectations set in November 2017
- Gross Research and Development (R&D) investment (before net capitalisation/amortisation of development costs relating to the Thin Film and 3D programmes) was £18.1 million in 2017 (2016: £22.4 million)
- Net cash of £44.7 million (2016: £49.3 million).

[1] Net cash includes cash, cash equivalents and treasury deposits.

Adjusted measures exclude items from the IFRS operating profit and profit before tax, such as restructuring and acquisition expenses, share-based payment charges, exchange differences on intra-group transactions and research and development credits, per the reconciliation of adjusted financial measures on page 102.

“The productivity and fluid flexibility we achieved with Xaar printheads and our advanced chemistry address market requirements for productivity and quality which to date have remained unmet.

Volker Hammes,
Managing Director, BASF 3D Printing Solutions GmbH

“The new Xaar 2001+ printheads have increased productivity dramatically and print quality is excellent.

Jorge Albalat,
Production Manager, Cerlat, Italy

Many applications such as flat panel display printing require tight regulation of coating thicknesses, precise patterns and management of substrate surface characteristics

Strategic Report

Governance

Financial Statements

Chairman's report

MOVING ALONG OUR TRANSFORMATION JOURNEY

"We are excited about leading the digital transformation of printing in many industries around the world, applying our leading-edge inkjet technology.

Robin Williams
Chairman

2017 marked a year of progress for Xaar on many fronts.

The most significant development related to the diversification of our revenue streams which have transformed from being over-reliant on one product for the Ceramics market to a portfolio of products addressing multiple market sectors. 80% of our product revenue was derived from products launched in the last two years or from the EPS acquisition. With new printheads launched into sectors such as Graphic Arts and Textiles (a new sector for Xaar) our Ceramics market dependence is reduced, accounting in 2017 for 34% of our revenue (2016: 44%).

We made further progress in our Thin Film Technology. The product design of 5601, the result of significant R&D investment over the last eight years, was frozen and we successfully demonstrated four colour printing at the InPrint 2017 show. In addition, we shipped development kits to eight of our partners for analysis and early stage development work as they look to integrate the 5601 into their next generation printers. We have also seen great success with the 1201 in its first full year having re-established ourselves in the Graphic Arts market.

In December 2016 we announced additional investment in 3D Printing led by Professor Neil Hopkinson and during 2017 we strengthened our expertise in the area by adding a team in Copenhagen and opening our 3D centre of excellence in Nottingham. We have started to develop a 3D printer using High Speed Sintering (HSS) and successfully demonstrated this to a select group of potential customers and partners towards the end of the year. A relatively modest investment to date is generating an exciting business, potentially offering significant medium term returns to our shareholders.

In December 2017 we announced an agreement with Seiko Instruments Inc. (SII) to upgrade and replace their existing licence for JPY 2.98 billion (circa £20.0 million).

The Group achieved an adjusted operating profit margin of 18% and a very healthy cash balance of £45 million at 31 December 2017, with the final tranche of the SII royalty payment received in Q1 2018. This puts us in a good position to fund growth opportunities.

The Board remains focused in supporting the management team on delivering this challenging transformation, which now has a variety of products and end applications in the frame. Whilst we are disappointed with the slower than expected adoption of some of our new products we are confident that the transformation we are undergoing will lead us to become a more diversified and customer-centric organisation.

Important changes across the business continue and we appreciate the support of all staff in achieving our vision. Talent management is key to our strategy and we have implemented various leadership and continuous improvement training programmes. I would like to thank our employees for their hard work and dedication throughout 2017.

Changes to the Board since 1 January 2017, are set out below:

- On 2 May 2017, Lily Liu joined Xaar as Chief Financial Officer and Company Secretary; following the departure of Alex Bevis on 29 March 2017. I am pleased to see Lily successfully transition into Xaar
- On 9 August 2017, we announced that Ted Wiggans, our Chief Operations Officer, plans to retire from Xaar plc on 9 August 2018. I would like to thank Ted for his contribution to the business and the Board.

Robin Williams
Chairman

21 March 2018

Printing direct onto PET bottles using low migration LED-cured UV ink with the Xaar-enabled Direct Print powered by KHS system

Who we are

LEADING THE DIGITAL INKJET REVOLUTION

We are a world leader in the development of digital inkjet technology. Our technology drives the conversion of analogue printing and manufacturing methods to digital inkjet which is more efficient, cheaper and more productive than the traditional methods it replaces. We design and manufacture printheads as well as systems for product decoration and industrial 3D Printing which use our inkjet technology.

The markets we serve

Industrial
The industrial markets we serve include Ceramics, Decor, Textiles, Advanced Manufacturing and industrial 3D Printing.

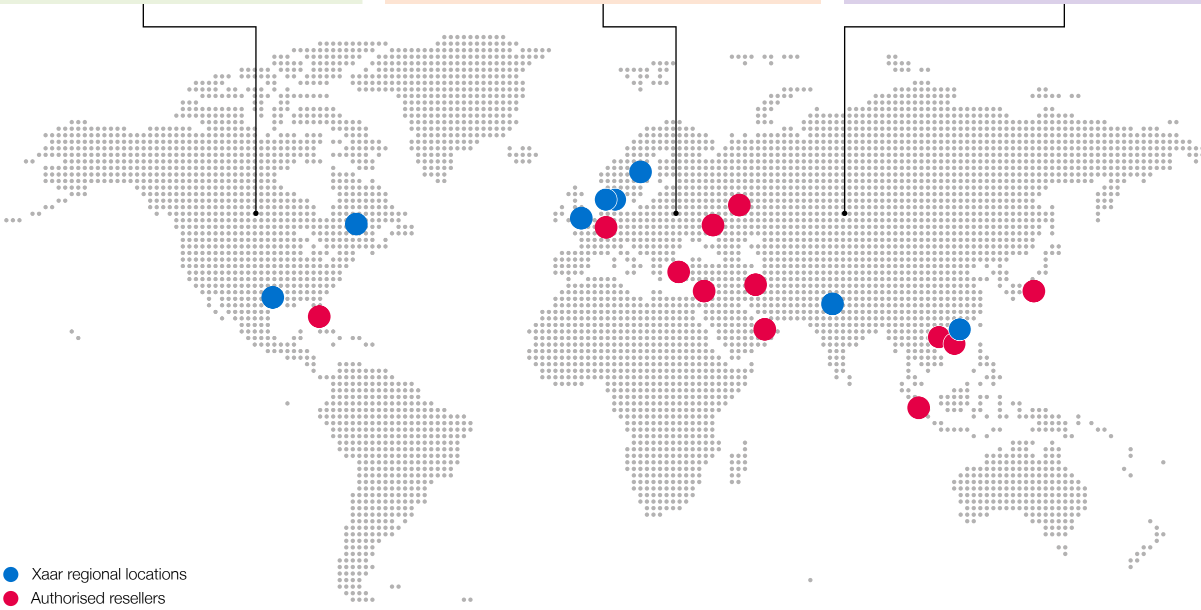
Packaging
The Packaging sectors we serve include Coding and Marking, Primary Labels, and Direct-to-Shape printing.

Graphic Arts
The Graphic Arts sectors we serve include Grand- and Wide-format graphics.

See page 8 to read about our markets

Where we operate

	Americas	EMEA	Asia
Revenue	£19.4m	£29.8m	£50.9m
Offices	2	5	2
Employees	79	514	10



What is digital inkjet?

Digital inkjet is an extremely versatile non-contact technology; it can be used to apply a wide range of fluids with precision accuracy to a range of different substrates. There are two key types of inkjet printing – Continuous Inkjet (CIJ: continuous flow of ink) and Drop-on-Demand (DOD: a drop of ink is only produced when it is needed). Xaar works with Drop-on-Demand inkjet technology.

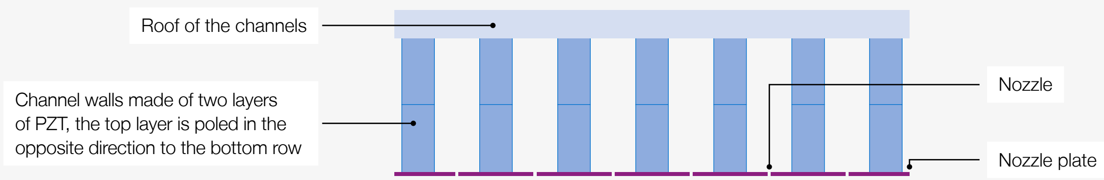
DOD inkjet is divided into three classes – Valvejet, Thermal inkjet and Piezoelectric inkjet, and this last class is Xaar's specialism. Piezoelectric inkjet technology uses piezoelectric material as a key active component within the inkjet printhead. Piezoelectric material exhibits a phenomenon called the piezo effect, in which, when a force is applied to certain materials, a charge (electricity) is produced.

Another effect, which is called the reverse piezo effect, occurs when you apply electricity to the material. In this case the material moves.

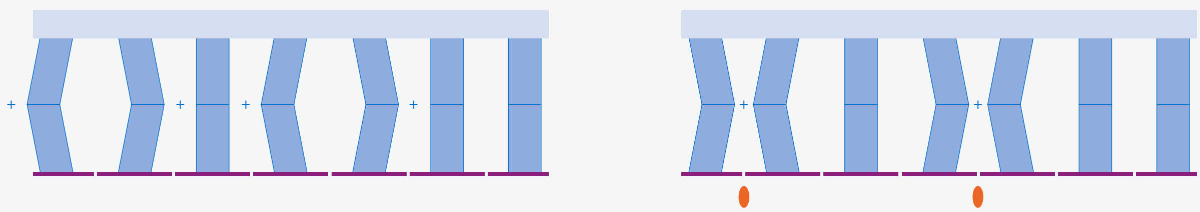
Piezoelectric printheads incorporate lead zirconate titanate (PZT), which is a manufactured piezoelectric material. All piezo printheads work in the same way. The PZT is deformed in order to fire an ink drop.

Xaar Piezoelectric printhead

The following series of diagrams illustrates how a standard piezoelectric Xaar printhead fires ink drops. The Xaar 1003 printhead has two rows of 500 channels, with a nozzle in each channel.



The diagram above shows the ink channels in a 'neutral' state. i.e. inactive and non-firing.



The diagrams above show what happens when a voltage is applied to the channel walls. As there are two layers of PZT which are poled in the opposite direction, when a voltage is applied, the PZT walls move in a chevron-shaped motion. As the walls move, acoustic waves are generated.

The acoustic waves travel up and down the channel. When the waves meet in the middle of the channel, an ink drop is ejected. Firing nozzles are separated by two inactive non-firing channels. Firing is staggered across the printhead.

Play video

What are the benefits of digital inkjet?

- Cost effective production with no limit on the run length and no minimum order
- Mass customisation and variable data printing is easy
- Short print runs for limited editions or localised promotions
- Printing onto irregular shapes is possible
- Rapid order turnaround once the design is agreed
- Simple workflow with quick and easy job setup and changeover
- Avoids the complexities, cost and waste associated with analogue printing
- Very controlled fluid deposition.

Our printhead portfolio

7 NEW PRODUCTS LAUNCHED IN PAST 24 MONTHS

For over 25 years we have developed leading-edge technologies which have enabled companies around the world to innovate as well as improve supply chain efficiencies. In order to broaden our portfolio and reduce our dependency on the Ceramics sector, we have launched seven new products over the last two years.

New products	Product	Key benefits	3D Printing	Advanced Manufacturing	Ceramics	Coding & Marking	Commercial Printing	Decor	Direct-to-Shape
●	Xaar 1003	Ultimate versatility in ceramic tile decoration	●		●			●	●
●	Xaar 2001 / Xaar 2001+	High print quality with high productivity	●		●				
	Xaar 128	Adaptable printhead with trouble-free integration	●	●		●			
●	Xaar 501	High production up-time and industrial reliability				●			
●	Xaar 502 O	Industrial reliability and mineral-oil free inks				●			
	Xaar 502 S	Exceptional print quality for wide-format graphics							
●	Xaar 1201	High print quality, highly versatile and easy to integrate							
●	Xaar 5501	High print quality, cost-effective and easy to integrate					●	●	
●	Xaar 5601	Delivering market-leading combination of total cost of ownership, print quality and usability					●	●	
	Xaar 1003 AM	Highly accurate fluid deposition for manufacturing		●					
	Xaar Ink Supply Systems	Industrial fluid control solutions	●	●	●		●	●	●
	Xaar Drive Electronics	Reduce Time-to-Market and rapid production ready solutions	●	●	●	●	●	●	●

	Graphics Arts	Labelling	Packaging	Product Printing	Textiles
		●	●	●	
		●	●	●	
	●				
	●			●	
	●				
	●				●
	●		●		●
	●	●	●		●
	●	●	●	●	●
	●	●	●	●	●

“We are delighted with the reports from tile manufacturers who have chosen the Xaar 2001+, particularly as many are utilising our unique High Laydown Technology. The decoration quality and special effects produced are unrivalled in the market, and present huge competitive advantages to tile manufacturers around the world.

Gerard Winn, Senior Product Manager, Xaar

Our market environment

OUR MARKETS AND OPPORTUNITIES

Industrial

The main sectors for Xaar within the Industrial market are:

Ceramic tile production

The creative design is the key feature which sells a tile. Today, the majority of the tile decoration market uses digital inkjet technology because, compared to traditional analogue techniques, it is superior in terms of image quality, is lower in cost, plus offers the advantages of flexibility, inventory reduction, and larger tile size capability. Whilst Xaar has an extensive install base in Ceramics as a result of gaining rapid market share when the market converted to digital several years ago, this is a mature market with strong competition. In 2017 Xaar launched HL Technology for the Xaar 2001+ and Xaar 1003 which has significantly improved suitability for special effects beyond competitive offerings.

Output m^2

13.1bn m^2

Global production lines #

10,000

Decorative laminates

Realistic wood finishes or creative design are the key features which sell the board/plank/finished item. The digital quality that is now being demonstrated with Xaar printheads matches quality produced by the analogue process, thereby offering the opportunity for more economic short run work to be undertaken whilst reducing inventories and improving Time-to-Market.

Output m^2

7.8bn m^2

Global production lines #

1,600

Advanced Manufacturing (functional fluids)

Xaar's focus is on functional fluid jetting because our inkjet technology offers an unrivalled method of non-contact, fluid deposition with incredible precision and control. Typically applications are challenging, pushing our technology to and beyond known limits in markets such as Flat Panel Display, Semiconductors and Optics. Through the work that we do we aim to develop these applications into commercial opportunities although this may take some years. However, there is increased interest in Xaar inkjet as a manufacturing technology and more than just a print technology.

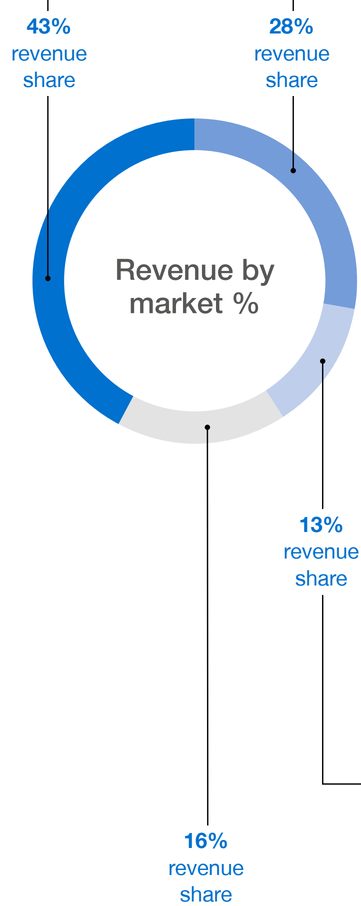
Play video

Industrial 3D Printing

3D Printing is a manufacturing methodology that encompasses a range of processes and applications, with a common theme of building parts up, usually layer-upon-layer. This additive approach ultimately enables manufacturers to eliminate the need for tooling. There are significant advantages, including superior geometric freedom, giving designers much more capability, and a substantial reduction in lead time for products. In addition 3D Printing provides the facility to tailor unique products to consumers, enable de-centralised manufacturing and shrink spare part storage.

Annual market growth rate %

23%



Packaging

The main sectors for Xaar within the Packaging market are:

Coding and Marking

Coding and Marking is an application which relates to printing product identification codes such as batch numbers, use by dates and barcodes. Xaar's technology is used to print barcodes and logos on outer case/ secondary packaging of consumer goods. This is an established and stable business, and competes with alternative technologies including print and apply, and thermal inkjet.

Product Printing

Product Printing is the practice of printing onto all kinds of industrial objects, including promotional items, packaging, medical, automotive, apparel, appliances, sports equipment and toys. The product printing market is served by multiple print processes with inkjet as the fastest growing. Xaar company, EPS, manufactures and sells a range of highly customised inkjet systems using Xaar technology for this sector.

Play video

Primary label

Labels are used for many different applications, including product identification, name tags, warning and hazard identification, promotions and as decals for product decoration. So far only 13% of this market has converted to digital printing to date. The change driver is the delivery of lower cost per copy on run lengths up to 100,000 impressions. There is a large range of substrates and inks in this application which adds complication to the conversion process.

Output m^2

57bn m^2

Currently converted to piezo inkjet %

6%

Play video

Direct-to-Shape

Direct-to-Shape is a relatively new application where bottles and containers have the image printed directly onto their surface without the need for a label. The solution is aimed at shortening Time-to-Market whilst simultaneously reducing inventory and unit costs versus existing methods. This approach also enables mass-customised marketing and event targeting.

Play video

Graphic Arts

The Graphic Arts sectors include Grand-and Wide-format graphics.

Grand- and Wide-format graphics

Grand- and Wide-format graphics (GWFG) includes both indoor and outdoor signage and advertising, including billboards, posters and point of sale advertising. It is the most mature industrial inkjet market, active for over 15 years. Xaar's presence in this highly competitive market has been reinvigorated by the launch of the Xaar 1201 in 2016.

Textiles

The Textiles market covers Direct-to-Garment (DTG) flatbed printing, roll-to-roll scanning, printing speciality fabrics and single-pass printing for high productivity.

Textile Printing

Textile Printing using digital inkjet technology is growing fast due to rapid shifts in consumer expectations such as fast changing fashion seasons, and the requirement to reduce waste and pollution. This drives the need for new, digital printing processes which are capable of delivering short print runs quickly, economically and in a more environmentally friendly way. Digital inkjet is particularly suitable for large format roll-to-roll apparel and also for printing soft signage textiles using dye sublimation.

Annual market growth rate %

17.5%

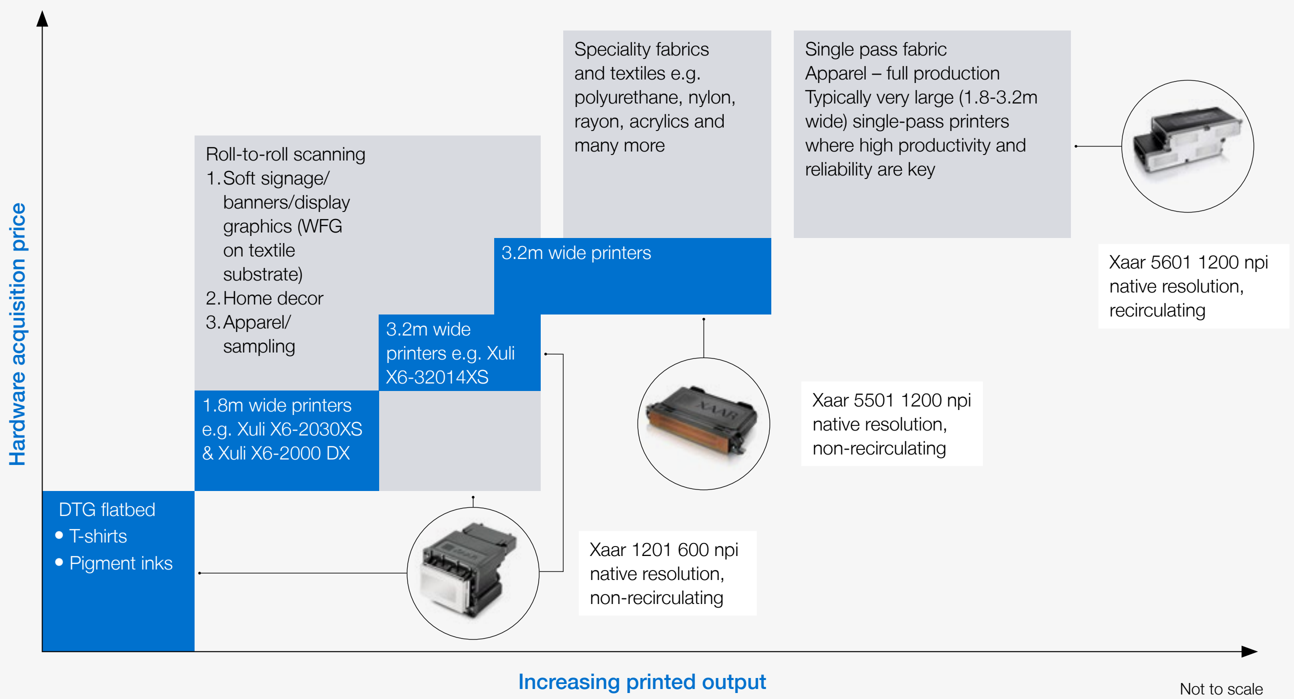
Read about Textiles in detail overleaf

Our market environment continued

FOCUS ON TEXTILES

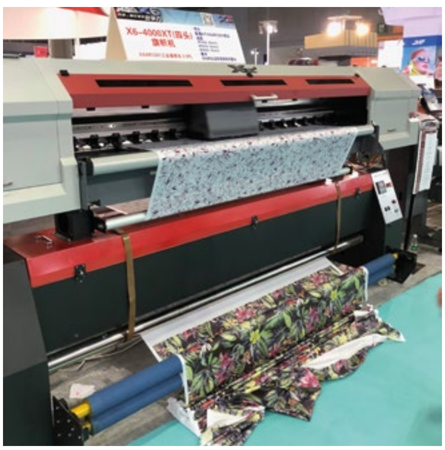
Xaar's printhead portfolio for Textiles addresses a significant portion of the sector: Low throughput requirements such as printing DTG, printing textile samples, printing speciality fabrics (polyurethane, nylon, rayon, acrylics and many more); and full production printing in a single-pass.

Digital textiles inkjet printer market – aqueous inks



Shading denotes main textile market applications.

[1] https://www.smitherspira.com/news/2013/june/digital-printing-trends-market-analysis-to-2018.



MARKET TRENDS AND OUR RESPONSE

Market trends		Our response
Digital finishes	A survey in 2016 into print buyers' preferences revealed they would be willing to pay a premium for printed effects and textures. In a bid to attract consumers and differentiate their products, more and more suppliers are choosing digital embellishment of their print, be it for packaging, decoration of building materials or general commercial print.	Xaar launched its HL Technology to partners working in a number of market sectors. For Ceramics, HL Technology is used to apply effects such as glosses and lustres, as well as adhesives, onto tiles once the tiles have been decorated digitally. In Packaging, HL Technology is ideal for applying textured embellishments on labels and folding cartons to enhance the appeal of the product, and in some cases to add braille script. For general commercial print, applications include applying raised effects to book covers to improve shelf appeal and to other printed items such as business cards.
A move to servicing an install base	In markets where analogue-to-digital conversion is well advanced, the focus shifts towards managing and servicing the installed base, ensuring customers get access to the spares and service they need and that they remain loyal to the brand.	Xaar recognised that the Original Equipment Manufacturers (OEMs) who had supplied many Xaar-based Ceramics printers in preceding years did not have the network to provide spare printheads and maintenance advice on printheads to their customers in a timely manner, particularly in regions more remote from their headquarters. To supplement OEM efforts, Xaar appointed a limited number of regional distributors whose sole focus is to hold printhead stocks closer to the point of actual demand and to advise end users on printhead maintenance and upgrades. The wider availability of printhead spares has reinforced Xaar's position in the installed base.
Digital becomes mainstream	As the analogue-to-digital conversion of a printing market gathers pace, there is a parallel drive to move from bespoke or customised printing solutions to standard, serially produced printers. This simplifies the work involved for printer suppliers to service a bigger installed base; in addition, the increased volume of standard machines leads to more attractive pricing, further driving digital adoption.	EPS launched the XD-360° printer, its first serially produced digital printer, in September 2017. The XD-360° is designed to print onto straight-sided and tapered containers such as cups and bottles for promotional and other purposes. This printer exploits the ability of Xaar printheads to print on vertical objects, ensuring a very small printhead footprint while offering excellent throughput.
Open systems	In markets where digital printing has become more mainstream and the interaction between consumables and printers is better understood, there is a drive on behalf of the users for open systems, whereby the use of a printer is not tied to a very specific set of consumables from the printer supplier. The introduction of competition into the supply of consumables creates more attractive pricing which only serves to improve the Return on Investment for digital printing.	Xaar works closely with many ink suppliers to ensure the materials compatibility of their inks with Xaar printheads. Another important area is the production of waveforms, which are the electrical signals used to drive the printheads and which need to be tuned to the specific nature of each ink to give optimum print performance. Until recently this has been a service provided exclusively by Xaar but in 2017 Xaar launched a waveform tool which enables qualified partners, such as ink companies and OEMs, to develop their own waveforms, opening up the use of an ever wider range of inks with Xaar printheads.
OEM base expanding	As the uptake of digital printing has accelerated, the market has seen many new entrants looking to design new digital printers. While the digital printer sector has grown there is still a shortage of experienced engineering and design talent to support a fast Time-to-Market, which has a knock-on effect on how quickly Xaar printhead sales can grow.	Xaar has enhanced its Go-to-Market capability with the creation of a new Application and Integration group of highly skilled inkjet engineers. The group's role is to support OEMs to correctly integrate Xaar printheads into the OEM's new printer designs. In addition, the Group will also advise on wider aspects of printer design.

Our technology

A WORLD OF OPPORTUNITIES

Our technology is used in a wide range of applications including ceramic tile decoration, coding, printing graphics for indoor and outdoor signage, labelling and packaging, as well as for Advanced Manufacturing and industrial applications such as Flat Panel Display, Semiconductors and Optics, and 3D Printing.


Advanced Manufacturing


Ceramic Tile Decoration

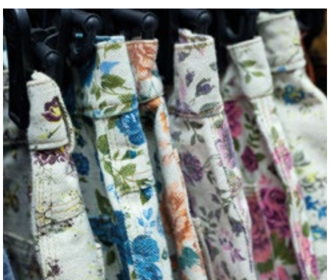
Coding & Marking

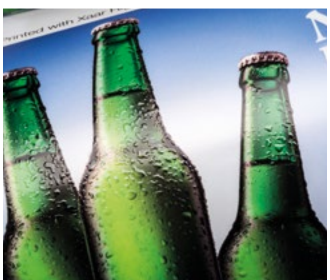

Decorative Laminates


Direct-to-Shape


Graphics


3D Printing


Textiles


Label Printing

Packaging


Product Printing

HL Technology the culmination of three years of research

Nick Jackson, Senior Engineer, Advanced Applications, joined the Cambridgeshire-based company in 2008 after graduating from Clare College (Cambridge University) with a Natural Science degree the previous year. For the last three years at Xaar, Nick has been investigating the impact on printhead performance of different electrical signals. HL Technology was borne out of this work.

Q. What is HL Technology used for?

A. HL Technology prints very high levels of UV inks or high build varnish for tactile effects that enhance shelf appeal for a wide range of packaging and labels. Effects possible include tactile varnish, raised foil, warning triangles and braille. HL Technology also achieves extremely high laydown levels for effects on ceramic tiles after decoration, so that gloss, adhesive and metallics can be printed at high line speeds.

Q. Why is HL Technology of interest to Xaar's customers?

A. In order to attract consumers and differentiate their products, more and more suppliers are choosing digital embellishments, be it for packaging, decoration of building materials or general commercial print since research confirms that consumers are willing to pay a premium for printed effects and textures.

> "This has been a very interesting research project for me, not least because the scope and potential impact of this new technology is significant. We see many applications for HL Technology and when combined with our Xaar 2001+ printhead, it can add unique value for our OEM customers.
>
> **Nick Jackson,**
> Senior Engineer
> Advanced Applications, Xaar

Our business model

CREATING VALUE FOR ALL STAKEHOLDERS

Our business model

Xaar sells its technology in component form (the printhead) to OEMs who produce and sell the complete digital printing solutions to the end market. Our full range of printheads are used in delivering solutions for numerous applications. We also actively partner and co-develop with fluid suppliers, hardware and software integrators, and substrate suppliers to deliver a robust and attractive total solution to the end user. In addition, for some applications – 3D Printing and Product Printing – we design and develop complete industrial printing machines which we sell to end users.

Our mission

Leading the digital inkjet revolution

Our vision

£220 million of annual sales by 2020

Xaar sells

Xaar sells direct to OEMs around the world through its global sales team. In some more mature Ceramics markets we also sell to regional distributors. Xaar's highly skilled application engineers offer the highest level of technical support to assist OEMs in the successful design, build, commissioning, and ongoing maintenance of printing systems. Europe, Asia and North America are the primary locations of our current OEM partners.

Xaar also sells product printing equipment, services and consumables via EPS, and Xaar's 3D Centre in Nottingham is responsible for selling Industrial 3D printers to OEMs and end users.

Xaar designs

Xaar invests a substantial proportion of sales (18% in 2017) in Research and Development (R&D) to remain a world leader in inkjet technology. Xaar has more than 317 patents and patent applications and continues to add to its Intellectual Property (IP) portfolio. At 31 December 2017 R&D staff totalled 113 representing 19% of the total workforce. We have R&D facilities in Cambridge and Nottingham, UK and also Copenhagen, Denmark, Stockholm, Sweden and Vermont, USA. We also work with strategic partners to jointly develop some products.

Xaar markets

Xaar offers a wide range of industrial inkjet printheads and printhead systems which are designed and produced to meet the customer-driven requirements of a range of manufacturing applications. Primary markets include Graphic Arts, Textiles, Ceramics, Labels, Packaging, Coding and Marking, Product Printing, 3D Printing, Advanced Manufacturing and Decor.

Xaar manufactures

Xaar manufactures its printheads in Huntingdon, UK. Xaar's manufacturing is capital intensive; the Group has invested over £70 million (2016: £68 million) in assets and production facilities in Huntingdon since the plant opened in 2007. We export over 97% of our printheads to customers around the world.

EPS, a Xaar company, manufactures customised and bespoke printing solutions in Vermont, US.

Xaar's 3D Centre in Nottingham is responsible for manufacturing its industrial 3D printers.

Our strategic pillars

In 2016 we defined four strategic pillars which support our 2020 vision to grow annual sales to £220 million:

Ceramics

Product Printing & Packaging

Thin Film

Acquisitions & Partnerships

The value we create

We create value for all our stakeholders.

Customers (OEMs) and end users (our customers' customers)

With Xaar technology, our customers and their customers are able to innovate in their manufacturing methods and their products as well as benefit from a shorter distribution chain; they can implement more precise and efficient processes, easily produce short batches, take products to market more quickly, improve productivity, reduce waste and unlock creativity.

Shareholders

A key goal at Xaar is to maximise the long term growth in value delivered to shareholders via sustained, long term growth in earnings per share. This is delivered through continued investment in R&D and producing a pipeline of new products which deliver a sustained return on capital employed. In 2017 we enhanced our commercial focus through investment in our Go-To-Market capabilities, specifically aimed at revenue growth. Shareholder value is also underpinned by a progressive dividend growth policy, which has seen the dividend paid to shareholders rise from 4 pence per share in 2012 to a total dividend of 10.2 pence for 2017 (including the proposed final dividend for 2017).

Employees

Our success depends on the capability of our people. We want bright and driven people who share our values and passion for developing and manufacturing world leading technology. We aim to build long term relationships with all our employees by helping them grow and develop and by making Xaar a great place to work and a great company to be involved with. In order to continue to transform the Company, and to encourage our employees to transform their careers at Xaar, in 2017 we launched XCEL. This is a comprehensive collection of new and existing employee development modules and opportunities such as GATE, our three year programme for individuals identified by Talent Management for accelerated learning.

Environment

Digital print methods are inherently more environmentally friendly than the analogue techniques we seek to replace. Research shows that, compared to analogue alternatives, digital has a huge impact in reducing energy consumption (by as much as 55%), water consumption (by up to 60%) and CO_2 emissions (by up to 95%), but also in reducing pollution and waste materials. Xaar is committed to reducing its impact on the environment wherever possible. Our actuator technology consumes less energy than competitor alternatives and our industrial printheads can remain in use for many years. In addition, we use a continuous improvement methodology and we have adopted a manufacturing ethos of "reduce, reuse and recycle". We are committed to adopting advanced manufacturing techniques in our own cleanrooms wherever possible. Some of these techniques reduce manufacturing waste and eliminate the need for tooling and parts.

Our strategic pillars

DELIVERING ON OUR STRATEGY

Strategic pillar | Highlights | Progress

Ceramics

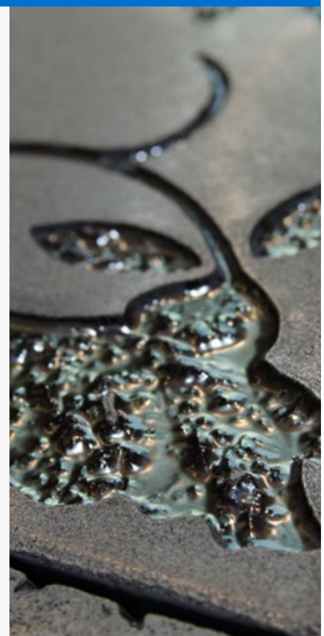
Market sector in 2017
Largest

Technology announced
High Laydown

The Ceramics sector was our largest market in 2017. We have a strong market share of the total installed base. Despite increased competition in this sector, we implemented a successful strategy for the Xaar 1003, with the focus on selling the upgrade opportunity for tile manufacturers with older Xaar printheads in order to benefit from improved performance and longer maintenance-free production run times.

The Xaar 2001+, launched in 2016, was targeted at tile manufacturers looking for a completely new printer. Whilst the Xaar 2001+ has been slow to gain traction, we saw increased sales towards the end of the year once we were able to augment the Xaar 2001+ with HL Technology, which was announced mid-year at Ceramics China 2017. HL Technology combined with the Xaar 2001+ gives us competitive advantages for adding decorative effects such as glosses and lustres, as well as adhesives.

See page 18



Product Printing & Packaging

Good progress in
3D Printing

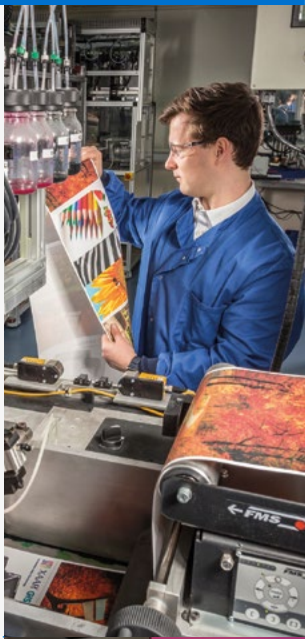
Outperforming a fast growing market
EPS growth

During 2017 we made good progress in 3D Printing. At the end of 2016 we hired an experienced team of engineers in Copenhagen to complement the team in Nottingham. In March we officially opened the Xaar 3D Centre in Nottingham where guests included ABB, BAE Systems and Jaguar Land Rover. Towards the end of the year we demonstrated the first prototype of the Xaar 3D printer using HSS technology, developed by the 3D teams in Nottingham and Copenhagen and led by Professor Neil Hopkinson. Other progress included announcing collaborations with Materialise (to provide their market-leading 3D print software with Xaar's additive manufacturing development kit) and with BASF, a world-leading chemical company (to improve the Photopolymer Jetting process which will enable manufacturers to produce 3D parts with enhanced properties at lower costs).

EPS, which supplies customised and bespoke printing solutions, continued to grow during 2017, outperforming a fast growing market. Whilst EPS is predominantly operating in North America, we started our plan to expand its global reach by appointing COMEC Italia as European distributor for its digital product portfolio.

See page 19

Strategic pillar	Highlights	Progress
Thin Film	Xaar 1201 sale of units over a 2 year period **90,000** Commercialisation planned in 2018 **Xaar 5601**	2017 has seen us making good progress with our Thin Film portfolio, despite it being slower than expected. The Xaar 1201 printhead achieved substantial sales in the Graphic Arts sector and we signed a master distribution agreement for the sale of 90,000 units over a two year period. The supply constraints we experienced in the second half of the year were resolved and we expect additional capacity for the 1201 to come on stream later in 2018. Our 5601 Thin Film printhead passed several key milestones, including freezing the design. In November we showcased the 5601's four colour print capabilities at the InPrint show where its exceptionally high resolution print quality attracted much interest. We sold a number of 5601 development kits to our key OEM partners to enable them to evaluate the printhead for their next generation of printers. The programme team is now focused on supporting full commercialisation of the product in 2018. See pages 20 to 21
Acquisitions & Partnerships	Joint Development Agreement for some bulk piezo printheads **Xerox** Partnerships in 3D Printing **Materialise & BASF**	In 2017 we broadened our collaboration with partnerships in a number of key strategic areas. We have explored, and will keep exploring, acquisition opportunities in the Product Printing space and in other carefully selected target markets. See page 34



Our strategic pillars in action

Ceramics

IMPROVING OUTPUT FOR CERLAT

Cerlat Production Manager, Jorge Albalat, is responsible for the running of Cerlat's ceramic tile production lines and constantly looks at ways to maintain and improve production output and quality. The recent installation of a KERAjet 700 printer with Xaar 2001+ printheads has been a winning combination.

Play video

The company's expertise is premium wall and floor tiles with stone, wood, marble and cement designs encompassing some beautiful special effects for added appeal to its worldwide customer base. Therefore achieving a high print quality whilst ensuring cost effective and reliable production is critical to Cerlat's success.

When Cerlat decided to install new machines, given the reliability of the KERAjet printers and Xaar printheads experienced over the years, without hesitation Jorge Albalat selected a KERAjet 700 machine with the new Xaar 2001+ printheads. Installation was quick and since January 2017 has printed hundreds of thousands of tiles at a line speed of 30m/minute. "The Xaar 2001+ printheads have increased productivity dramatically," says Jorge Albalat.

Product Printing & Packaging

XAAR 3D

A key strand of Xaar's 2020 vision is 3D Printing. In 2016 the Company appointed Prof. Neil Hopkinson as Director of 3D Printing with a remit to drive the newly formed 3D business. In December 2016 Xaar announced the opening of two 3D centres, in Nottingham, UK and Copenhagen, Denmark; Neil also built up his team to include a number of project managers and 3D engineering specialists.

The 3D industry is moving from prototyping to production of end use parts, and creating substantially higher demand for scalable production and increasing mechanical performance of the parts made. Two of Xaar's core technologies are particularly relevant to overcoming these challenges:

- Xaar's TF Technology has an advantage over competitor technology because it enables jetting of viscous fluids that have a high particle content, leading to improved part integrity and quality
- Xaar's HL Technology enables vastly increased throughput, satisfying industry's demand for volume production in a way that competing products cannot achieve.

Xaar's 3D business is now split into two streams:

- High Speed Sintering (where Xaar is developing complete industrial level 3D printing machines)
- The printhead business (where the Company assists OEMs looking to use Xaar technology to build 3D printers).

High Speed Sintering developments are largely continuing behind closed doors while in the printhead business, announcements included the collaboration with BASF to improve the Photopolymer Jetting process also known as Material Deposition. This collaboration will enable manufacturers to produce 3D parts with improved properties and lower costs than currently possible.

Our strategic pillars in action continued

Thin Film

XAAR 5601 UPDATE

The Xaar 5601 has been in development for seven years. With over £31 million invested in its research and development, getting customer feedback during the final stages of product development has been critical to ensuring a successful product launch.

During 2017 a number of development milestones were passed, freezing the product design, allowing the start of the final product to be manufactured and a demonstration of four colour printing. Customer feedback on the print samples they received from Xaar was extremely positive. Good progress was also made on developing the ecosystem which surrounds the Xaar 5601, which includes the drive electronics and ink supply system which are necessary to ensure OEMs can properly evaluate and get the most out of the new technology in their printers.

Using Xaar's new Thin Film Piezo Silicon MEMS technology, the Xaar 5601 is very high resolution with over 5,600 nozzles, capable of jetting up to eight litres of fluid per hour.

New innovations such as AcuDrp Technology allow complete control over greyscale drop ejection for perfect image quality.

The Xaar 5601 incorporates TF Technology to maximise production up time, print quality and lifetime. In addition, with the unique Z profile, multiple printheads can fit closely together for an exceptionally compact print zone, accurate drop placement between colours and reduced costs associated with accurate media control and positioning. This new printhead is optimised for aqueous inks and provides excellent suitability for other low viscosity fluids. Its small drop and outstanding performance make it ideal for a number of markets and Xaar's initial focus will be on Textiles, Commercial print and Packaging.

Thin Film

XAAR 1201 UPDATE

Xaar 1201 flexibility excites Graphic Arts and Textiles market.

The flexibility and productivity offered by the Xaar 1201 printhead sparked global interest in a high number of OEMs working in the Graphic Arts and Textiles sectors after it was launched in 2016. In particular, Xaar partnered with OEM Guangzhou Xucheng Electronic Technology to bring to market their Xaar 1201-based printers under their brands.

In a further deepening of the relationship, in September 2017 Xaar appointed XuCheng's subsidiary, Guangzhou HaoCheng International, as Xaar 1201 Master Distributor in Greater China. HaoCheng's focus in 2017 and 2018 is to support printer development and provide printhead supply deals to a wide network of distributors and OEMs launching their own Xaar 1201 printers.

Since then, we have seen the number of new Xaar 1201-based printers on the market rise quickly, and in 2018 we expect this trend to continue.

Chief Executive Officer's report

CONSISTENT STRATEGY TAKING US FORWARD

"We continue to drive towards our 2020 vision with a more diverse and balanced portfolio of products and businesses.

Doug Edwards
Chief Executive Officer

2017

January
Xerox – signing of the Joint Development Agreement

March
3D – official opening of the Xaar 3D Centre in Nottingham

March
Materialise – collaboration announced to provide 3D print software with Xaar's additive development kit

June
Master distribution agreement for the Xaar 1201 signed for 90,000 heads over two years

June
HL Technology – launched at Ceramics China show

November
InPrint 2017 – Xaar 5601's four colour print capabilities and exceptionally high resolution print quality showcased

November
BASF collaboration announced to improve Photopolymer Jetting process

COMEC Italia – European distributor for EPS announced at InPrint 2017

2018

I am pleased to report that our transformation journey is well underway and that new products launched in the last two years and the acquired EPS business accounted for nearly 80% of the Group's total product revenue in 2017.

We are at different stages of commercialising seven new printhead products across a diverse range of markets and applications. We signed a 90,000 unit master distribution agreement for our 1201 printhead of which we have delivered circa 13,000 units since June. The design of our 5601 printhead was frozen in July and development kits shipped to eight major Textiles, Commercial and Package Printing partners. The first product of our partnership with Xerox, the 5501, achieved revenues of £3 million largely in digital printers for textile printing. In other areas of the business we saw a significant increase in revenues from printheads being used in the manufacture of flat panel displays and we are now working with more than a dozen OEMs.

Our Product Printing business EPS, acquired in July 2016, continues to perform to plan with growing revenues from their digital products. We strengthened our European distribution channel for EPS through a partnership with COMEC Italia.

In March we opened our new 3D Centre in Nottingham and, along with the addition of a team based in Copenhagen, we continue to strengthen our position in 3D Printing. This was followed by our strategic partner announcements later in the year with Materialise and BASF. In November we demonstrated our first HSS prototype Xaar 3D printer to a number of potential partners.

In December we announced that we had reached agreement with SII to upgrade and replace their existing licence agreement in exchange for JPY 2.98 billion (circa £20.0 million). We received the first tranche in December 2017 and the balance was settled in Q1 2018. This is significant as it de-risks our future royalty revenue stream.

We have made further progress in our transformation to a more customer-centric organisation, funding additional Go-To-Market resources through efficiency savings elsewhere in the organisation. The slower than anticipated growth in sales of our new products has necessitated this strengthening of our Go-To-Market resources.

Despite the success with our new indirect channels for the 1003 bulk printhead in the replacement market our Ceramics business remains under competitive pressure. The ramp up of our new 2001+ bulk printhead was slower than planned. However, we are now starting to see improved traction helped by the adoption of our HL Technology which was introduced in the middle of 2017.

We continue to drive towards our 2020 vision with a more diverse and balanced portfolio of products and businesses. Progress made against each of the pillars that make up our 2020 vision is described below.

Ceramics

Ceramics remained our largest market sector in 2017 and we continue to retain a strong market share with a large proportion of the printer install base still using Xaar printheads. Increased competition has seen our market share and revenues from this sector fall. With the Ceramics market having now reached maturity and nearly all lines converted to digital, the majority of new printer sales are machine replacements or upgrades.

In 2016 we launched two new products aimed largely at responding to the decline in our existing Ceramics products. The launch of the Xaar 1003 printhead has been a success in addressing the existing printer install base. It offers the ability to upgrade existing machines by replacing the Xaar 1002 printheads with one offering improved performance and longer maintenance-free production run times.

Sales of the 2001+ printhead, which was also launched in 2016, have gained traction slowly. Unlike the 1003 it is not backward compatible with existing machines and is therefore targeted solely at new machine installs. With the current level of market maturity and competition OEMs have been slow to invest in new designs and subsequently the 2001+ printhead has been slow to ramp up and unable to address the decline in Xaar's market share of new installs. However, we saw increased sales in both Q4 2017 and early 2018 as we better demonstrated the value proposition of the printhead and leveraged the new HL Technology made available mid-year.

At the Ceramics China show in June we announced our Premier Partner programme and the release of our advanced HL Technology. HL Technology is used to apply effects, such as glosses and lustres, as well as adhesives, once the tiles have been digitally decorated.

Product Printing & Packaging

In 2016 we selected two areas to focus on; Product Printing and 3D Printing, and we continue to make good progress in both.

I am delighted to report the ongoing success of the EPS business acquired in July 2016 which has continued to grow, meeting our expectations. The ability of EPS to supply customised and bespoke printing solutions, which are both flexible and cost effective, to a wide variety of market sectors highlights the potential of digital inkjet in product printing. EPS has been able to outperform what is already a fast growing market and one that is still largely analogue. EPS remains predominantly based in North America, with a large growth potential. We plan on investing further in its North American operations and expanding its global reach. At InPrint 2017 EPS announced COMEC Italia as its European distributor for its digital product portfolio.

During 2017 we have made really exciting progress in 3D. At the end of 2016 we hired an experienced group of talented engineers working in Copenhagen, Denmark, to complement the skillset of the team already established in Nottingham. In March 2017 we announced a collaboration with Materialise to provide their market-leading 3D print software with Xaar's additive manufacturing development kit. We then officially opened the Xaar 3D Centre in Nottingham, UK, an event attended by guests from a number of large international businesses including ABB, BAE Systems and Jaguar Land Rover. In November we announced a collaboration with BASF, a world-leading chemical company, to improve the Photopolymer Jetting process which will enable manufacturers to produce 3D parts with enhanced properties at lower costs. We then demonstrated, to a small select group of partners and potential customers, the first HSS prototype Xaar 3D printer designed in conjunction by the Copenhagen and Nottingham teams under the leadership of Professor Neil Hopkinson.

The 5501, our first printhead from our collaboration with Xerox, has contributed meaningful revenues since it was announced in June 2017. The bulk piezo printhead has been added to our portfolio of aqueous printheads, complementing the existing Thin Film printheads the 1201 and the 5601. The 5501 has enabled us to address more of the Textiles market and, in combination with our increased Go-To-Market capabilities, has allowed us to achieve significant revenues in the second half of 2017.

Within the Coding and Marking sector the 501 and 502 printheads have been adopted by major OEMs (Videojet, Engage, RN Mark & Domino) and sales of these are expected to grow further in 2018. Despite the adoption of the 501 and 502 by these major OEMs the Coding and Marking sector has declined from its 2016 position which was helped by one-off Last-Time-Buy arrangements for products manufactured in Sweden.

The Product Printing and Packaging pillar has grown 24% adjusting for the impact of the one-off Last-Time-Buy arrangements in 2016.

Thin Film

Good progress has been made in Thin Film in 2017 despite being slower than expected.

In the first half of the year we saw substantial sales of the 1201 printhead into the Graphic Arts sector and signed a master distribution agreement for the sale of 90,000 units over a two year period. Sales of the 1201 continued to grow in the second half of the year but were hampered by supply constraints that meant we were unable to fulfil all of the demand. These supply constraints have now been resolved, and with additional capacity coming on stream later in 2018 we expect to achieve further growth in sales of the 1201.

The development programme for our own Thin Film printhead technology passed several key milestones. Working with our manufacturing partner for the 5601 the design was frozen in July. Focus is now on ensuring supply chain reliability and improving our own manufacturing capability in order to ramp up production. At InPrint 2017 we showcased the 5601's four colour print capabilities and its exceptionally high resolution print quality garnering much interest. We have sold a number of 5601 development kits to our key OEM partners who now have, or will be, evaluating the printhead for their next generation of printers. Customer feedback has been very positive and we truly believe we have a printhead which will unlock the digital conversion of very large and established analogue industrial printing markets such as Textiles, Commercial Printing and Packaging.

Acquisitions and Partnerships

As already noted, we are delighted by the success of our first acquisition as part of the 2020 vision, EPS. We continue to explore opportunities in the Product Printing space and target markets that support our vision.

The first products from the Ricoh and Xerox partnerships have yielded significant sales in 2017 and are expected to grow further in 2018. We strengthened our relationship with Xerox with the announcement of a Joint Development Agreement to develop the next generation of bulk piezo printheads. In 3D we have built partnerships with Materialise and BASF. EPS has partnered with COMEC Italia to establish a European Distribution channel. We collaborated with Meteor Inkjet to produce a development kit and commercial drive electronics for the 1201 printhead that shortens OEMs' Time-to-Market and optimises the printhead performance.

Product and technology development

Building on the success of 2016 we have continued to deliver new products and technologies to the market. With seven new products launched in the last 24 months we have greatly diversified the portfolio we can offer to both new and existing customers.

Our development team has made significant progress on the 5601 allowing us to demonstrate the capabilities of the printhead and put it in the hands of our partners. The programme team is now focused on supporting full commercialisation of the product in 2018.

We continued our transformation from an internally focused product company to a market and customer lead business, redeploying resources from both operations and R&D to our Go-To-Market functions. As well as investing in our Sales and Marketing group we have established an Applications and Integration team to provide a new layer of technical support to help our customers shorten their development time and Time-to-Market. This strategy has already allowed us to achieve significant revenue from some of our new products.

People

As part of our transformation strategy we have invested significantly in our people in order to develop a customer focused mind-set and enhance leadership, change management and resilience skills. During 2017 we launched a suite of Learning and Development programmes, collectively called XCEL. This includes a world class programme called Inspired Leaders which was rolled out to managers across the Company, and will be extended to the rest of the workforce in 2018. Inspired Leaders targets the most critical skills needed to transform a workforce's mindset and skill set. XCEL also includes a three year programme for High Potential Development called GATE which combines hands-on instruction from Senior Executives, a suite of self-assessment tools, group interaction and project work in the most business critical areas within Xaar. We have also implemented Continuous Improvement activities and Six Sigma training across the Company to remove non-value add activities, streamline processes, and enhance our ability to partner with our customers effectively.

I would like to thank all of our staff for their efforts during 2017; we have had to overcome a number of challenges in the year but have taken some important steps forward in achieving our vision.

Summary and outlook

We are making good progress in transforming Xaar into a more diversified and customer centric Company. Challenges still remain in our legacy business as Ceramics matures and the speed of transition to alternative printhead technologies, such as Thin Film, gain traction. We are well positioned with a more balanced and diverse portfolio of growing new products and businesses. I am particularly pleased that 80% of our product revenues now come from the seven new printhead products and two new businesses we have added in the last 24 months and that excluding Ceramics they have grown 23% in the year. This trend is set to continue with investment in these exciting growth areas.

We remain focused on the long term opportunity, the conversion of well-established analogue manufacturing techniques to digital inkjet solutions and the delivery of our 2020 vision.

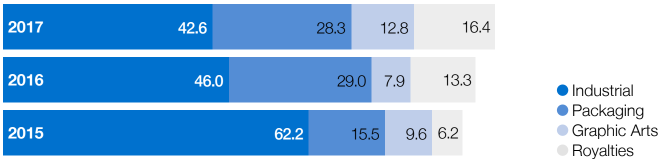
Doug Edwards
Chief Executive Officer

21 March 2018

Key performance indicators

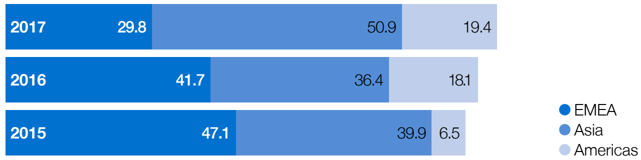
MONITORING OUR PROGRESS

Revenue by sector £m



Declining Ceramics revenue in the Industrial sector has been offset by growth in Graphic Arts and increased Royalties.

Revenue by region £m



In Asia growth is driven by new products going into the Graphics Arts and Textiles markets and stronger sales from the Ceramics sector. Growth in the Americas is driven by the EPS acquisition. EMEA continues to decline as Ceramics market share reduces.

Gross margin %

47.0%

Gross margins have been helped by increased Licensee Royalties.

Gross R&D investment £m

£18.1m

Gross R&D investment is defined as net capitalisation/amortisation of development costs relating to the Thin Film and 3D programmes.

Gross R&D spend has decreased as new products are delivered to market and resources are made available to strengthen Go-To-Market activities.

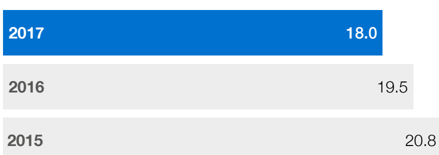
Adjusted operating margin %

18.0%

Adjusted operating margin has decreased as general overhead costs have increased.

Adjusted profit before tax £m

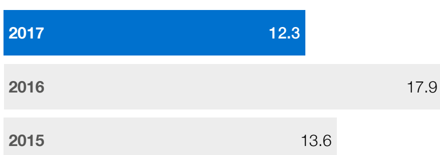
£18.0m



Adjusted profit before tax is taken from note 4 in the financial statements.

Profit before tax £m

£12.3m

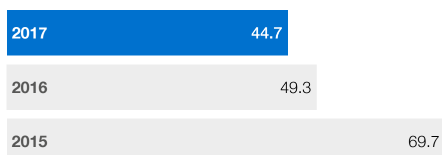


Profit before tax has decreased largely due to increased overhead and restructuring costs.

The rise in overheads relates to increased share-based payment charges and the removal of a one off foreign exchange benefit in 2016 due the Brexit referendum.

Net cash balance £m

£44.7m



Despite increases in working capital we maintain a strong net cash balance which positions us well to fund future investment opportunities.

Chief Financial Officer's report

DIVERSIFIED REVENUE AND REDUCED CAPITAL EXPENDITURE

"The Group maintains a strong financial position, which allows us to fund growth opportunities.

Lily Liu
Chief Financial Officer
and Company Secretary

Summary of financials

	2017	2016	2015
Revenue £m	**£100.1m**	£96.2m	£93.5m
Gross margin %	**47.0%**	46.4%	47.8%
Gross research and development expenses £m	**£18.1m**	£22.4m	£19.9m
Adjusted operating margin %	**18.0%**	19.8%	21.8%
Operating margin %	**12.1%**	18.1%	14.1%
Adjusted profit before tax £m	**£18.0m**	£19.5m	£20.8m
Profit before tax £m	**£12.3m**	£17.9m	£13.6m
Adjusted diluted earnings per share	**20.7p**	21.2p	24.5p
Diluted earnings per share	**14.0p**	18.9p	16.1p
Net cash and treasury deposit balance £m	**£44.7m**	£49.3m	£69.7m
Net cash flow £m	**(£4.6m)**	(£20.4m)	£22.7m

Adjusted measures exclude items from the IFRS operating profit and profit before tax, such as restructuring and acquisition expenses, share-based payment charges, exchange differences on intra-group transactions and research and development expenditure credits, per the reconciliation of adjusted financial measures on page 103. Net cash includes cash and cash equivalents, and treasury deposits.

Through product portfolio diversification and a re-balancing of our global presence, we note progress in revenue quality underpinned through our continued transformation. The Group maintains its strong financial position, enabling a flexible response for growth opportunities.

Revenue

The Group achieved total revenue for the year of £100.1 million (2016: £96.2 million) representing a 4% increase. Whilst disappointed by the slower-than-anticipated revenue growth in the second half of the year, I am pleased to report a 23% product revenue growth excluding Ceramics.

In December 2017 we announced that we reached an agreement with SII to upgrade their current licence arrangement and replace its future royalty obligations in exchange for a total cash consideration of JPY2.98 billion (circa £20.0 million). This agreement substantially de-risks our future royalty stream. The 2017 royalty revenue includes £10.0 million derived from the one-off SII licence upgrade and replacement agreement. Total Licensee Royalties in 2017 were £16.4 million (2016: £13.3 million)

Sales into Graphic Arts grew by 62% reaching £12.8m for 2017 (2016: £7.9 million) and accounted for 13% of the total revenue for the year. The significant growth in this sector was driven by the success of the 1201 printhead by way of our master distribution agreement in China. In November 2017 we reported that there was a supply constraint that hampered delivery and restricted sales. These constraints have now been addressed and we expect further growth in 2018.

Our Industrial sector no longer includes revenues from the acquired EPS business as they have been reclassified to the Packaging and Product Printing sector. Industrial continues to be the largest sector for Xaar's technology, representing 43% of Group revenue in 2017 at £42.7 million, compared to 48% in 2016 (£45.9 million) on a like for like basis.

The largest revenue contributor in Industrial continues to be ceramic tile decoration. The Ceramics sector has now reached maturity with nearly all lines now converted to digital; revenue was £33.7 million in 2017 a decline from £42.3 million in 2016. The replacement market for printers and printheads has become key and intensity of competition in the sector has continued to drive down prices. The 1003 printhead has been successful and allowed the business to retain its prominent position in the replacement market for printheads. However, adoption of the 2001+ printhead has been slower than anticipated and the business has lost share in new printer installs. The Ceramics sector has fallen 20% since 2016 and now represents just over one third of total revenues.

There has been significant level of growth in nearly all other industrial sub-sectors. We are excited about the 83% increase in the combined Advanced Manufacturing and 3D Printing sectors. This has been driven by a shift in manufacturing processes for flat panel displays and also our leading-edge technologies for 3D Printing. We are equally encouraged about our first revenues of £3.9 million from the Textiles sector, a new market for us, driven by new products within our portfolio.

The Packaging and Product Printing sector has declined slightly by 3% and at £28.3m now represents 28% of the Group's total revenue (2016: £29.0 million, 30%). As mentioned above, we re-classified the EPS business into this sector. EPS grew by 109% thanks to a full-year contribution and continued growth in the business. Decline in sales into Coding and Marking of 53% was a combination of one-off Last-Time-Buy arrangements in 2016 for products previously manufactured in Sweden, and slower adoption of the next generation of products.

As a supplier of technology to OEM partners, our geographic sales split reflects where our OEMs are located, which is not necessarily the end-user location.

In 2017 Asia overtook Europe, Middle East and Africa (EMEA) as the Company's largest sales region. Sales into Asia accounted for £50.9 million (2016: £36.4 million) of sales, representing 51% of the Group's revenue.

Product sales i.e. excluding Licensee Royalties grew 49% largely due to the take up of new products going into Graphic Arts and Textiles. In Ceramics we have reversed the trend of decline in China with increased sales of both the 1003 and 2001+ printheads.

Sales into EMEA have fallen 28% with EMEA accounting for £29.8 million (2016: £41.7 million) of the Group's total sales. This reduction is mainly due to the result of falling sales to European Ceramics OEMs.

The Americas, with a total revenue of £19.4 million (2016: £18.1 million), grew 7%. Much of the growth in the Americas comes from the full year contribution of EPS; this growth was restricted by the decline in sales into Coding and Marking, driven by the one-off Last-Time-Buy arrangement in 2016.

Profitability

We reported an overall adjusted operating margin in 2017 of 18% (2016: 20%). This decline in profitability is due to a combination of factors. The removal of a one-off foreign exchange benefit in 2016 due to the Brexit referendum; a significant reduction of the Thin Film capitalisation from 2016 (£10.2 million) to 2017 (£4.9 million net capitalisation/amortisation) which was partially offset by a reduction in gross R&D spend; and increased royalties.

Gross profit margins increased from 46.4% in 2016 to 47.0% in 2017, helped by increased Licensee Royalties of £3.1 million. Gross profit margins excluding royalties fell from 37.8% to 36.6%. The reduction reflects increased price pressures in Ceramics, lower utilisation of the factory, higher costs on new products as sales volumes increased more slowly than anticipated, and the dilutive effect on the gross profit margin of the increased contribution of sales from products sourced from our partners.

Gross expenditure on R&D (before expense capitalisation/amortisation) decreased by 19% from £22.4 million in 2016 to £18.1 million in 2017 as a number of new products were delivered to market and resources are made available to support Go-To-Market activities. The first products from the Thin Film programme were made available in H2, and as required under International Financial Reporting

Standards (specifically IAS 38) amortisation of the programme commenced. In addition to the capitalisation of the Thin Film programme, £0.9 million was capitalised relating to the development of a new 3D Printer technology platform. This 3D printer technology was successfully demonstrated to selected potential customers and partners in late 2017. The net R&D spend for 2017 increased from £12.2 million in 2016 to £12.3 million.

Sales, marketing and general administrative costs increased to £16.9 million (2016: £13.4 million) on an adjusted basis, due to foreign exchange trading losses (2017: £0.6 million loss, 2016: £1.9 million gain) and a full year of EPS' costs.

Adjusted profit before tax of £18.0 million was recorded for 2017 (2016: £19.5 million). Underlying adjusted profit before tax (excluding the benefit of one-off SII royalties and foreign exchange trading losses) was £9.0 million, in line with revised expectations. Profit before tax as reported under IFRS was £12.3 million (2016: £17.9 million).

The tax charge on adjusted profit before tax was £1.9 million (2016: £2.9 million), representing an effective tax rate of 10% (2016: 15%) which compares favourably to the blended UK corporation tax rate for 2017 of 19.25%. The effective rate is low as Xaar benefits from intellectual property and our continued investment in R&D.

The tax charge on IFRS profit before tax was £1.4 million (2016: £3.1 million) representing an effective tax rate of 11% (2016:17%).

Effective from 1 January 2018 the US corporate income tax rate reduced from 35% to 21%. We do not expect this to significantly affect the Group's tax rate in the short term.

Adjusted profit after tax for 2017 was £16.1 million (2016: £16.6 million) and adjusted diluted earnings per share was 20.7 pence (2016: 21.2 pence).

Financial position

The Group maintains a strong financial position, which allows us to fund growth opportunities. 2017 was marked as a year for the business to start reducing its capital expenditure, as we move away from a vertically-integrated development and manufacturing model to working more closely with our strategic partners. We saw a reduction in our capital expenditure in the year of £5.3 million (or 49%) and a reduction in our capitalised development expenditure in the year of £3.8 million (or 36%).

We recorded £44.7 million of cash and treasury deposits at 31 December 2017, a decrease of £4.6 million compared to balances held at 31 December 2016, but an increase of £6.4 million from 30 June 2017.

Operating cash inflow, being adjusted profit before tax after adding back depreciation and amortisation, was £27.3 million (2016: £28.1 million). The change in working capital during the year represented a net cash outflow of £12.9 million. Receivables increased £9.2 million reflecting the phasing of revenue in the year, the establishment of terms with new customers, and extended credit terms for customers driving the adoption of our new products. Inventory increased £5.1 million as we ramped up production of new products and as sales of these new products give rise to an increasingly complex supply chain. This working capital impact was however offset by a significant reduction in fixed capital expenditure for the Group. Total cash outflow relating to intangible and tangible assets was £12.0 million in the year, including £6.5 million of capitalised development expenditure. Dividends accounted for £7.7 million of all cash outflows.

Intangibles

Intangible assets were reported at £32.7 million at 31 December 2017 (£27.4 million at 31 December 2016). These assets are largely associated with the Thin Film development project which was capitalised over the last four years. Amortisation of this project started in August 2017 after the design was frozen and development kits were made available for sale. We will amortise this technology platform over a 20 year period. In addition, £0.9 million was capitalised relating to the development of a new 3D Printer technology platform.

Treasury and currency management

As we continue to explore further acquisition opportunities, we carefully manage our cash and its corresponding liquidity profile.

With a more diversified business model as well as sourcing from strategic partners across the globe, the Group has increased exposure to foreign exchange risk, in particular to the US Dollar. As much as possible, we match our billing currencies to our settlement currency to achieve a natural hedge.

Dividend

As announced in 2014, the Company employs a progressive and sustainable dividend policy which takes into account the Group's future prospects, its underlying profitability and the future cash requirements of the business. The Board will recommend a final dividend of 6.8 pence for 2017 (2016: 6.7 pence) at the forthcoming Annual General Meeting (AGM), giving a total dividend for the year of 10.2 pence, a 2% increase over 2016 (10.0 pence). An interim dividend of 3.4 pence was paid during the year (2016: 3.3 pence). Subject to approval by shareholders at the AGM the final dividend will be paid on 29 June 2018, with an ex-dividend date of 31 May 2018, to shareholders on the register at close of business on 1 June 2018.

Lily Liu
Chief Financial Officer and
Company Secretary

21 March 2018

Risk management

PRUDENT RISK MANAGEMENT

Effective risk management is key to our success against the dynamics of the industry that we operate in and the characteristics of our chosen business model. The printing industry in which we operate is, in general, declining in terms of total output, tends to be capital intensive, is slow to react to change and is resistant to the adoption of new technology. Product lifecycles tend to be long. Our business model is reliant on us first driving the conversion of well-established processes to our technology, then maintaining our market position to maximise sales through both the initial conversion and replacement cycles in order to generate profits to enable us to invest in new technology and open up new applications.

The first approach to managing these risks is to have high quality individuals within the necessary functions that these risks tend to fall into. Other examples of the effective day to day management of these risks include operating multi-functional teams to share knowledge across the business, having regular stage gates in the management of development programmes, and the regular assessment of manufacturing capacity against future potential needs. In addition to day to day processes the Group's risk register is formally reviewed twice per year at senior management and Board level, including the assessment of the performance of risk management during the preceding period.

The Board has applied principle C.2 of the UK Corporate Governance Code by establishing a continuous process for identifying, evaluating, and managing the significant risks the Group faces which has operated throughout the year and up to the date of this report. Such a system is designed to manage rather than eliminate the risk of failure to achieve business objectives and can only provide reasonable and not absolute assurance with respect to the preparation of financial information and the safeguarding of assets against material misstatement or loss.

In compliance with provision C.2.1 of the UK Corporate Governance Code, the Board regularly reviews the effectiveness of the Group's system of internal control. The Board's monitoring covers all controls, including financial, operational and compliance controls and risk management systems. It is based principally on reviewing reports from management to consider whether significant risks are identified, evaluated, managed and controlled and whether any significant weaknesses are promptly remedied and indicate a need for more extensive monitoring. The Board has also performed a specific assessment for the purpose of this Annual Report. This assessment considers all significant aspects of internal control arising during the period covered by the report. The Audit Committee assists the Board in discharging its review responsibilities.

In 2016 we launched a number of new products, including the Xaar 5601 from our major Thin Film development, and the Xaar 1201 from our partnership with Ricoh. We also launched the Xaar 2001+ family of bulk printheads for Ceramics. These product launches position us well for the future, but they also create more risk around the reliance on those new products delivering growth, and this has been reflected in the table of principal risks and uncertainties.

Following our strategic review in 2015 we identified Partnerships and Acquisitions as an essential element of our vision of £220 million of annual sales by 2020, and in 2016 we completed our first acquisition as part of the 2020 vision, as well as securing two important partnerships; with Ricoh and Xerox. Risks around M&A has been added to the table of principal risks and uncertainties as a consequence of our renewed external focus.

Key risk areas

The risks around our existing business are set out in more detail on pages 30 to 33, but the key risk areas can be identified as being associated with the following:

Competition
Maximising returns over the long term in the target application through early adoption to achieve a market leading position and then retention of that position.

Identification of market requirements
Successfully developing products with the characteristics that meet market requirements within the necessary timescale.

Commercialising and maintaining products with cutting edge technology
Creating value by generating innovative products

Merger and acquisition opportunities
Seek opportunities to expand, create synergies and generate greater shareholder value.

Organisational capability
Having the right people in the right roles.

Brexit
Tracking the potential impact of the UK Government's negotiations.

Manufacturing facility
Diversifying products, locations and manufacturing partners to alleviate operational issues.

Exchange rates
Monitoring global economic events and mitigating any resulting significant exchange rate impacts.

Partnerships
Working with the right companies, at the right time on the right terms to deliver long term value.

Risk management continued

A reminder of our strategic pillars

1 Ceramics | 2 Product Printing & Packaging | 3 Thin Film | 4 Acquisitions & Partnerships

Principal risk and uncertainty	Link to strategic pillars	Impact	Mitigation	Likelihood	Magnitude	Change on 2016
1. Competition	1, 2, 3	We compete on the basis of our technology, innovation, price, quality, reliability, brand, reputation and customer relationships. Failure to continually improve in these areas may mean that we lose market share or have to reduce prices. Since there are fixed factory costs reductions in sales volumes may substantially lower profit margins. We are the only true independent printhead company in the world and we are competing with vertically integrated large scale multi national companies.	Competitive pricing policies are employed and product portfolios and pricing are constantly monitored against competitors. Our recent strengthening of our Go-To-Market capabilities allows us to focus more on our customers and also increase our ability to monitor competitor activity. Manufacturing cost reduction programmes are established to ensure that products remain competitive. Information from customers, partners, market reports and other sources are collected, consolidated and reviewed to improve forecasting. Through selected partnership agreements we have extended our product range and expanded our market access.	Probable	High	↑
2. Failure to identify market requirements	1, 2, 3	Products need to meet the changing demands of the market, including regulatory changes. Failure to meet future market requirements/specifications could impact on long term revenue and profit.	Regular, specific and detailed reviews are held to assess current and anticipated market requirements, including expected regulatory changes. These reviews include input from customers and other external sources. Product developments are selected on appropriate criteria. Product development activity is properly managed with regular reviews of progress against project plans, and gated milestone reviews. Appropriate resource is applied to product development activity. We have a rigorous product lifecycle management process which ensures we focus on our customers.	Possible	High	→

A reminder of our strategic pillars

1 Ceramics 2 Product Printing & Packaging 3 Thin Film 4 Acquisitions & Partnerships

Principal risk and uncertainty	Link to strategic pillars	Impact	Mitigation	Likelihood	Magnitude	Change on 2016
3. Commercialising and maintaining products with cutting edge technology	1, 2, 3	We aim to produce quality end products. Failure to meet the required quality standards could impact on products that have been sold or that are held in inventory. This could lead to: • unexpected costs associated with resolving the issues • possible warranty costs, customer compensation or write-down in inventory values • potentially longer term revenue loss if customers move to competitors and damage of reputation We operate in an increasingly dynamic and changing environment. To counter the risks associated with this and, most importantly, to exploit the opportunities it presents, we must embrace innovation, protect our Intellectual Property and capitalise on technology advancements to ensure we maintain our market position.	Standard operating procedures are in place for the manufacture of all products. The quality of supplies is constantly monitored. Quality performance is regularly reviewed by senior management who apply appropriate resources to systematically address recurrent problems. New products are thoroughly tested before launch. Xaar's manufacturing facilities are ISO 9001 accredited. Customer returns are reviewed quickly using a consistent and thorough investigation process. We have continued to focus on innovation. This is evidenced by our continued focus on R&D spend and the number of new products that we are now bringing to market.	Possible	Medium	→
4. Merger and acquisition opportunities	2, 4	One of our goals is to increase growth both organically and by acquisition. There are many risks and opportunities arising from external acquisitions. Planning, implementation and management of changes are essential and failure to get this right could lead to lost synergies and increased costs.	We have robust due diligence procedures and plan for integration of the target as part of the due diligence process. At each stage of any acquisition process we undertake a thorough review with the Board.	Possible	Medium	↓

Risk management continued

A reminder of our strategic pillars

1 Ceramics | 2 Product Printing & Packaging | 3 Thin Film | 4 Acquisitions & Partnerships

Principal risk and uncertainty	Link to strategic pillars	Impact	Mitigation	Likelihood	Magnitude	Change on 2016
5. Organisational capability	1 2 3 4	Our people remain key to our business. Ensuring the right people are in the right roles is critical to our future success and growth. We need to attract and retain the right talent to enable achievement of our strategic aims. Failure to do this risks our delivery and growth as follows: • lack of staff to meet a specific business need or contract requirement • loss of project specialisms • single point of failure • loss of key skills.	Our focus is to minimise the voluntary turnover of employees, through better hiring for fit, improved induction procedures and employee engagement initiatives. Xaar has a talent fast track programme in place to retain and progress key talent at all levels. During 2017 a suite of Learning and Development courses (XCEL) has been rolled out across the Company to ensure key skills are maintained and enhanced. There are also regular departmental reviews for succession planning.	Possible	Medium	↓
6. Brexit	1 2 3 4	The United Kingdom's decision to leave the European Union presents both risk and opportunities to the Company. There is currently a prolonged period of uncertainty concerning EU workers, migration and trade. Some of our current workforce have migrated from other countries in the EU and the continued recruitment of world class talent is critical to our success in a technical and specialised industry. Another challenge continues to be free trade into the EU. Around one third of our customers are located in EU countries and so any actual or perceived barriers to free trade are an obvious area of concern.	We are actively monitoring the UK Government's position on the various matters for negotiation and the potential impact these may have on Xaar.	Possible	Medium	→

A reminder of our strategic pillars

1 Ceramics
2 Product Printing & Packaging
3 Thin Film
4 Acquisitions & Partnerships

Principal risk and uncertainty	Link to strategic pillars	Impact	Mitigation	Likelihood	Magnitude	Change on 2016
7. Loss of manufacturing facility	1 2 3	We have one manufacturing facility in Huntingdon; and we rely on our strategic partners for key products and for key components for 1201, 5501 and 5601. If our manufacturing site or our partners' manufacturing sites were to experience an incident this could have operational and supply chain issues for the business.	Formal disaster recovery plans are maintained and reviewed. We are also able to use manufacturing partners to alleviate some operational issues. The Group's risk is spread by diversification in products and locations. Insurance coverage is regularly reviewed.	Remote	High	↓
8. Volatility in exchange rates	1 2 3 4	Global economic events and uncertainty may cause currencies to fluctuate and currency volatility contributes to variations in our sales of products and services in impacted jurisdictions. The risk is that there could be significant adverse movements in currencies which cause a foreign exchange loss, reducing profit.	There is a partial natural hedge for foreign currency movements. Our treasury policy allows us to hedge. Cash flows are constantly reviewed and action is taken when appropriate.	Possible	Medium	→
9. Partnerships	2 3 4	Companies with whom we have alliances in certain areas (i.e. manufacturing/research) may already be or may become our competitors in other areas. In addition, companies with whom we have partnerships may also acquire or form alliances with our competitors, which could reduce their business with us. If we are unable to effectively manage these complicated relationships with alliance partners, our business and results of operations could be adversely affected.	During 2016 a new role (Director of IP) was introduced. Part of the role focuses on the extensive review of legal agreements and in particular IP with such partners. Maintaining healthy partnerships is a key part of the role of our Chief Technical Officer. Partnerships are constantly reviewed both internally and with those partners at the most senior level.	Possible	High	↑

Our strategic pillars in action

Acquisitions & Partnerships

PARTNERSHIP PROGRESS

During 2017 we made good progress with developing some key partnerships to help progress our 2020 vision.

We announced a Joint Development Agreement with Xerox to develop the next generation of industrial bulk piezo printheads, with the Xaar 5501 announced as the first from this collaboration. In 3D we have built partnerships with Materialise (to include their market-leading 3D software with our 3D printer development kits), and BASF. We are working with BASF to improve the Photopolymer Jetting process which will enable manufacturers to produce 3D parts with improved properties and lower costs than currently possible.

In addition, we confirmed our collaboration with Meteor Inkjet to produce a development kit and commercial drive electronics for the Xaar 1201 printhead that shortens OEMs' Time-To-Market as well as ensures the best printhead performance possible. In November we signed a partnership agreement with COMEC Italia who will establish a European Distribution channel for EPS's digital products.

Sustainable and responsible business

DEVELOPING A SUSTAINABLE BUSINESS

> “The Imagineering Club has been very well received in the school and the children love attending it! We really appreciate the time Xaar gives to organising and running the club and helping create real excitement amongst the children about the STEM subjects each year.
>
> **Karen Martin,**
> Headteacher, Grove Primary School

Our community

Xaar sponsors two Imagineering Clubs at local primary schools. These Clubs are designed to introduce children to engineering through fun activities. The sponsorships are part of Xaar's role in helping to create the 'engineers of the future' and drive interest in STEM subjects (science, technology, engineering and mathematics) amongst school students.

The Group strongly believes that corporate responsibility is integral to business success. The Group is compliant with all relevant regulation and legislation whilst enhancing the working environment for our employees and minimising the environmental impact of our manufacturing processes. There is internal reporting of key metrics throughout the business, and each member of staff is expected to take individual responsibility for their performance and to work together to achieve shared goals.

Social responsibility

- Xaar employees raised money during the year for a number of charities, including taking part in various activities for Comic Relief on Red Nose Day and for Christmas Jumper Day (Save the Children).
- Xaar has sponsored a number of employees and their families engaging in events throughout the year, including charity golf days, Red Nose day, 5k Race for Life and a cycling event. In total, the Group made charitable contributions to local and national charities during the year totalling £766 (2016: £11,767). No political donations were made in the year (2016: £nil).
- The social club, which is aimed at encouraging staff to have fun and get to know each other socially, held several events throughout the year including theatre trips, festivals, family fun days, sports activities such as ice skating and Pretty Muddy Race for Life, meals and nights at the races.
- Xaar continues to sponsor an Imagineering Foundation club which operates at primary schools in both Huntingdon and Cambridge. Supported by eight volunteer tutors from Xaar's Operations and R&D teams, the weekly, hour-long after-school clubs are attended by up to 12 Year Six students. The students learn about basic science and engineering concepts and make working mechanical and electronics-based models, such as a balloon-powered 'rocket' car, a steady hand game and even an AM radio. The club's aim is to introduce young people of 8-16 years to the exciting world of engineering, science and technology through fun, hands-on activities.

Human rights

The Group respects all human rights and in conducting its business the Group regards those rights relating to non-discrimination, fair treatment and respect for privacy to be the most relevant and to have the greatest potential impact on its key stakeholder groups of customers, employees and suppliers.

The Board has overall responsibility for ensuring that the Group upholds and promotes respect for human rights. The Group seeks to anticipate, prevent and mitigate any potential negative human rights impacts as well as enhance positive impacts through its policies and procedures and, in particular, through its policies regarding employment, equality and diversity, treating customers fairly and information securely. Group policies seek both to ensure that employees comply with the relevant legislation and regulations in place in the UK and other operating locations and to promote good practice. The Group's policies are formulated and kept up to date by the relevant business area, authorised by the Board and communicated to all employees.

The Group undertakes extensive monitoring of the implementation of all of its policies and has not been made aware of any incident in which the organisation's activities have resulted in an abuse of human rights.

Equality and diversity

The Group is committed to providing a working environment in which employees feel valued and respected and are able to contribute to the success of the business. Employees are requested to co-operate with the Group's efforts to ensure that the policy is fully implemented.

The Group's aim is that its employees should be able to work in an environment free from discrimination, harassment and bullying, and that employees, job applicants, customers, retailers, business introducers and suppliers should be treated fairly regardless of:

- Race, colour, nationality (including citizenship), ethnic or national origins
- Gender, gender reassignment, sexual orientation, marital or civil partnership status
- Religious or political beliefs or affiliations
- Disability, impairment or age
- Real or suspected infection with HIV/AIDS
- Membership of a trade union
- Pregnancy, maternity and paternity.

and that they should not be disadvantaged by unjust or unfair conditions or requirements.

The Group aims to ensure that applications for employment from people with disabilities, and other under-represented groups, are given full and fair consideration and that such people are given the same training, development and job opportunities as other employees. Every effort is also made to retrain and support employees who suffer from disabilities during their employment, including the provision of flexible working to assist their re-entry into the workplace.

Human Resources policies are reviewed regularly to ensure that they are non-discriminatory and promote equality of opportunity. In particular, recruitment, selection, promotion, training and development policies and practices are monitored to ensure that all employees have the opportunity to train and develop according to their abilities.

The Group places considerable value on the involvement of its employees and has continued to keep them informed of the various factors affecting the performance of the Group. This is achieved through written communications shared through the Company intranet and email, and formal and informal meetings. All employees participate in a bonus scheme based on individual performance and Group business targets and, in the UK, have the opportunity to participate in an HMRC approved Share Save Scheme and Share Incentive Plan.

Formal directives and certification

The Group undertakes R&D and manufactures products in the UK and the USA. The Group complies with all local and European legislation. The Group's manufacturing facility in Huntingdon is both ISO 9001 and ISO 14001 certified. It is the Group's policy to maintain this level of certification for its manufacturing facilities and to comply at all times with all relevant environmental and other legislation in the territories in which the Group operates. The Group is compliant with REACH (Registration, Evaluation, Authorisation and restriction of Chemicals), WEEE (Waste Electrical and Electronic Equipment) and RoHS (Restriction of the Use of Certain Hazardous Substances) directives, as required under European legislation.

The Group has a proactive Health and Safety System modelled on OHSAS 18001/HSG65 in Cambridge, Huntingdon and Nottingham.

The anti-bribery and corruption policies of the Group are set out in the Corporate Governance section on page 53.

Health, safety and environment

Xaar has a manufacturing site in Huntingdon, along with R&D and head office functions in Cambridge, Nottingham, Europe and the USA, plus sales offices worldwide.

It is always Xaar's intention to conduct business in a manner that protects the public, the environment, and employee safety. Xaar's Environmental and Health & Safety policies provide a framework for setting and reviewing of Occupational Health, Safety and Environmental Objectives. This demonstrates Xaar's commitment to the prevention of injury and ill health and also the continual improvement in Environmental and Occupational Health & Safety Performance. Xaar recognises that the combination of a safe place of work and safe working practices, together with a productive and innovative environment, are critical to the continued success of the Company.

The management of Xaar is committed to achieving and maintaining full compliance with environmental, health and safety legislation. Although certain responsibilities under this policy can be attributed to specific roles within the organisation, and in particular with different levels of management, each and every Xaar employee shares the core basic duty to understand their responsibilities to observe instructions put in place and, where necessary, to draw these to the attention of others.

To achieve our Environmental and Health & Safety policies, Xaar will ensure that the organisation is led by example; systems are in place to engage, train, develop and maintain competent, informed personnel; resources are allocated to enable safety standards to be maintained; employee involvement and open communication are actively encouraged; plant, equipment and facilities are safe and without risk to the health and welfare of all persons who could be affected by their use or maintenance; substances required and used in the workplace are handled and disposed of safely; a comprehensive risk assessment programme is maintained covering all activities and processes, with control measures implemented to minimise risk where applicable; adequate welfare facilities are provided; where accidents or 'near misses' occur, they are reported, investigated and treated as the source of learning for ongoing working practices; and that best practice is shared across the Group.

The Group is committed to minimising its impact on the environment through the reduction and recycling of waste and by operating its facilities as efficiently as is practicable. Our printhead technology improves process efficiency and reduces wastage in our end user markets.

Based on the closing headcount at 31 December the split of staff by gender was as follows:

	31 December 2017 male/female	31 December 2016 male/female
All employees	**453/115**	512/127
Directors	**5/2**	6/1
Senior managers	**77/13**	87/15
Employees excluding Directors and senior managers	**371/100**	420/111

Sustainable and responsible business continued

GREENHOUSE GAS EMISSIONS STATEMENT

Xaar plc has calculated its global greenhouse gas (GHG) emissions statement using an operational control consolidation approach as described in the Greenhouse Gas: Protocol: A Corporate Accounting and Reporting Standard (Revised Edition, 2004), which reflects the Defra Environmental Reporting Guidelines (Revised October 2013).

Scope 1 emissions

Scope 1 emissions occur from sources that are owned or where Xaar plc has operational control. This includes direct emissions from gas combustion in our buildings and fuel used in leased company vehicles. Actual and estimated gas consumption data has been collected from each of the leased properties under the control of the Xaar Group, from data sources including direct meter readings, meter readings from suppliers included on invoices and estimations where required based on available information from property management suppliers and other sources. Actual mileage data has been collected from the leased company vehicle fleet.

Scope 2 emissions

Scope 2 refers to indirect emissions from the consumption of purchased electricity (also including any purchased heat, steam or cooling) from facilities owned or under the operational control of Xaar plc. Actual and estimated data has been collected from each of the leased properties under the control of the Xaar Group, from data sources including direct meter readings, meter readings from suppliers included on invoices and estimations where required based on available information from property management suppliers and other sources.

Assessment parameters

Baseline year	1 January 2013 to 31 December 2013
Consolidation approach	Operational control
Boundary summary	All entities and all facilities under operational control included subject to the materiality threshold applied
Consistency with the financial statements	The only variation is that leased properties deemed to be under operational control have been included in scope 1 and 2 emissions
Materiality threshold	Materiality has been set at Group level at 5%*
Assessment methodology	Greenhouse Gas Protocol and ISO 14064-1 (2006)
Intensity ratio	Emissions per £m turnover excluding royalties

* The total of any excluded emission sources are estimated to be less than 5% of Xaar plc's total reported emissions.

	2017		2016	
GHG emission source	(tCO_2e)	(tCO_2e/£m)	(tCO_2e)	(tCO_2e/£m)
Scope 1	**148**	**2**	167	2
Scope 2	**4,088**	**49**	4,432	53
Statutory total (scope 1 and 2)	**4,236**	**51**	4,599	55

The GHG emissions statement includes emissions data from leased assets that are not included in the rest of the consolidated financial statements, other than in note 31 Operating lease arrangements.

Board approval of the Strategic and Annual Reports

BOARD APPROVAL

The Strategic Report, Annual Report and Financial Statements, taken as a whole, are fair, balanced and understandable and provide the information necessary for shareholders to assess the Company's performance, business model and strategy.

Robin Williams
Chairman

Doug Edwards
Chief Executive Officer

Lily Liu
Chief Financial Officer
and Company Secretary

Ted Wiggans
Chief Operations Officer

Margaret Rice-Jones
Senior Independent Director

Andrew Herbert
Non-Executive Director

Chris Morgan
Non-Executive Director

Board of Directors

DIVERSE AND CAPABLE LEADERSHIP

Robin Williams
Chairman

Appointed: 2010 (Chairman: 2016)

Qualifications
- MA Engineering Science, Oxford University
- ACA, Peat Marwick Mitchell.

Experience
- Ten years as a corporate advisor
- Co-founder of Britton Group plc and grew the business to £250 million revenues within six years, before selling to a trade buyer
- Executive Director of Hepworth plc, with a leading role in the rationalisation and subsequent sale of the group
- Held various public and private company directorships across a range of industries including business services, healthcare, outsourcing, contracting, and manufacturing.

Current external appointments
- Chairman of Stirling Industries Plc, FIH Group Plc, Keystone Law Plc and NHS Professionals Ltd (to 31 March 2018)
- Non-Executive Director of Van Elle Holdings Plc.

Committee membership

A R N

Doug Edwards
Chief Executive Officer

Appointed: 2015

Qualifications
- BSc Chemistry
- PhD in Conducting Organic Materials, London University.

Experience
- Responsible for Kodak packaging, functional printing, electrophotographic solutions, commercial and consumer Inkjet Systems with revenues of around $800 million. Prior to this Doug ran Kodak's largest Graphics business with revenues of $1.5 billion
- Vice President of Research and Product Development, New Business and Strategy Development at Kodak Polychrome Graphics (KPG), a 50/50 joint venture between Eastman Kodak Company and Sun Chemical Corporation
- Technical roles with Ilford Limited, ICI, Zenica Specialities and International Paper
- Scientific papers, patents and other publications to his name.

Committee membership

N

Lily Liu
Chief Financial Officer and Company Secretary*

Appointed: 2017

Qualifications
- Chartered Management Accountant
- MBA from the Australian Graduate School of Management.

Experience
- Spent the past four years at FTSE 100 Smiths Group PLC, where she held a number of senior financial and management roles
- From 2014 to 2016, Lily was CFO of the Smiths Detection Division with reported revenues of £526 million for 2016
- Director of Financial Planning and Performance Analysis at the Group level, reporting to the Group Chief Financial Officer
- Worked at Edwards Ltd, the world leader in the manufacture and supply of industrial vacuum systems, which was part of the FTSE 100 BOC Group Plc until 2007, when it was acquired by private equity firm, CCMP.

* Lily joined Xaar plc from 2 May 2017.

Ted Wiggans
Chief Operations Officer*

Appointed: 2011

Qualifications
- Chartered Engineer, Fellow of Institution of Mechanical Engineers
- BSc in Mechanical Engineering.

Experience
- Over 30 years' experience in high technology operations
- Chief Operating Officer at Cambridge Semiconductor Ltd (CamSemi)
- Operations Director at Zetex Semiconductors with overall responsibility for its multi-site, multi-national manufacturing activities and a global team of 500
- Held senior-level manufacturing, engineering and quality roles with Motorola and Philips.

Current external appointments
- Manufacturing Industries Division Board of the IMechE.

* Ted plans to retire from Xaar plc on 9 August 2018. Ted's role will be replaced at the Executive, but not Board level.

Andrew Herbert
Non-Executive Director

Appointed: 2016

Qualifications
- Chartered Management Accountant, BA (Hons) in Business Studies.

Experience
- Extensive experience in the global digital printing industry following a 30-year career with Domino Printing Sciences plc, working both in the UK and the US
- Group Finance Director/Chief Financial Officer of Domino Printing Sciences plc from 1998 to 2015 during which time he played an instrumental role in expanding the business geographically through acquisition and creation of sales channels, and in broadening the product range via acquisition of technology based businesses
- Previously held a number of line director roles in Finance, Operations, Planning and Business Development.

Current external appointments:
- Non-Executive Chairman of Midwich Group plc.

Committee membership:
A R N

Margaret Rice-Jones
Senior Independent Director

Appointed: 2015

Qualifications
- BSc in Engineering, Durham University.

Experience
- Over 25 years' experience within innovative technology businesses
- Engineering background and has operated at Board level in various executive and non-executive roles for the last 15 years
- Margaret was CEO of Aircom International, a global software and services company, and Corporate Vice President of Motorola Inc.
- P&L responsibility for over $1 billion revenue and has worked with both business turnaround situations and high growth companies including Skyscanner where she was Chairman.

Current external appointments:
- Margaret is currently Chairman at Openet Ltd and Origami Energy Ltd.

Committee membership:
A R N

Chris Morgan
Non-Executive Director

Appointed: 2016

Experience
- Wealth of expertise in managing complex international technology businesses, having spent 25 years at HP Inc.
- Strong background in global marketing, sales and general management senior executive roles including global accountability for HP's multibillion dollar graphics/industrial portfolio of digital 2D and 3D printing businesses from 2009-2012
- Extensive experience in Asia and Japan having spent more than a decade in senior APJ leadership roles
- Led strategic investments in key growth markets and has been involved in a number of mergers and acquisitions at both the strategic and operational levels.
- Chief Marketing Officer for Stratasys in 2014-2015 and recently served as Senior Vice President of Americas and Asia for 3D Systems, Inc. until January 2018.

Committee membership:
A R N

Board dashboard

Chairman
1

Executive Directors
3

Non-Executive Directors
3

Gender balance
Male:Female
5:2

Length of tenure (to December 2017)
0-3 years
5

3-10 years
2

Key to Committees
A – Audit
R – Remuneration
N – Nomination
Chairman
Member

BOARD STRUCTURE

Board of Directors

Management Committee

Principal Committees

Audit Committee

The Audit Committee is responsible for monitoring and reviewing the integrity of the financial reporting process, including the appropriateness and effectiveness of the Internal Controls and Risk Management procedures of the Group.

Chairman Andrew Herbert

See pages 54 to 55

Nomination Committee

The Nomination Committee is responsible for reviewing the size, structure and composition of the Board and providing advice to the Board on Board and senior management appointments and succession planning; monitoring of the composition of the Board and its Committees.

Chairman Robin Williams

See page 56

Remuneration Committee

The Remuneration Committee is responsible for the development and implementation of the Group's remuneration framework and policies for Directors including all incentives and bonuses.

Chairman Margaret Rice-Jones

See page 57

REPORT ON THE AFFAIRS OF THE GROUP

The Directors present their Annual Report on the affairs of the Group together with the financial statements and auditor's report for the year ended 31 December 2017. The Corporate Governance statement set out on pages 49 to 57 forms part of this report.

An indication of likely future developments in the business of the Company and details of research and development activities are included in the Strategic Report. The Group's policies relating to equality, diversity and employee consultation can be found in the 'Sustainable and responsible business' section of the Strategic Report on pages 35 to 37.

Details of the proposed dividend are set out on page 28.

The Greenhouse gas emissions statement can be found on page 38.

Capital structure

Details of the issued share capital, together with details of the movements in the Company's issued share capital during the year, are shown in note 25. The Company has one class of ordinary shares which carries no right to fixed income. Each share carries the right to one vote at general meetings of the Company.

There are no specific restrictions on the size of a holding nor on the transfer of shares, which are both governed by the general provisions of the Articles of Association and prevailing legislation. The Directors are not aware of any agreements between holders of the Company's shares that may result in restrictions on the transfer of securities or on voting rights.

Details of employee share schemes are set out in note 32.

No person has any special rights of control over the Company's share capital and all issued shares are fully paid.

With regard to the appointment and replacement of Directors, the Company is governed by its Articles of Association, the UK Corporate Governance Code, the Companies Act and related legislation. The Articles themselves may be amended by Special Resolution of the shareholders. The powers of Directors are described in the Main Board terms of reference, copies of which are available on request, and the Corporate Governance statement on page 56.

Treasury

The Group's policy enables it to use financial instruments to hedge foreign currency exposures. The main trading currency of the Group is the Pound Sterling. The Group's use of financial instruments and the related risks are discussed further in notes 19, 20 and 23.

At the 2017 AGM held on 16 May 2017, the Company's shareholders granted the Company authority to make one or more market purchases (within the meaning of section 693(4) of the Companies Act 2006) of ordinary shares of 10 pence each in the capital of the Company.

The Company did not purchase any shares for cancellation or to be held as treasury in 2016 or 2017.

Directors and their interests

The Directors who served during the year, and subsequent to the year-end, unless otherwise stated, were as follows:

Robin Williams – Chairman

Doug Edwards – Chief Executive Officer

Lily Liu – Chief Financial Officer and Company Secretary (appointed on 2 May 2017)

Ted Wiggans – Chief Operations Officer

Margaret Rice-Jones – Senior Independent Director

Chris Morgan – Non-Executive Director

Andrew Herbert – Non-Executive Director

Alex Bevis – Chief Financial Officer and Company Secretary (resigned on 29 March 2017)

Brief biographical descriptions of the Directors are set out on pages 40 and 41. Full details of their interests in shares of the Company and its subsidiary undertakings are included in the Directors' Remuneration report on pages 58 to 79.

Directors' report continued

REPORT ON THE AFFAIRS OF THE GROUP CONTINUED

Shareholdings in the Company

The interests of the Directors in the shares of the Company and its subsidiaries (all of which are beneficial) as at 31 December 2017 are as follows:

	Number of ordinary shares of 10p each 31 December 2017	Number of ordinary shares of 10p each 31 December 2016
Doug Edwards	**33,885**	32,913
Lily Liu	**14,000**	–
Ted Wiggans	**71,239**	71,239
Robin Williams	**10,000**	4,000
Margaret Rice-Jones	**5,700**	5,700
Chris Morgan	**–**	–
Andrew Herbert	**–**	–

There have been no changes in the Directors' interests in shares of the Company between 31 December 2017 and 21 March 2018. Directors' interests in options over shares in the Company are shown in the Directors' Remuneration report.

Directors' liabilities

The Company has granted an indemnity to all of its Directors against liability in respect of any potential proceedings that may be brought by third parties, subject to the conditions set out in the Companies Act 2006. Such qualifying third party indemnity provision remains in force as at the date of approving the Directors' report.

Share capital

As at 31 December 2017 the Company had been notified in accordance with Chapter 5 of the Financial Conduct Authority's (FCA's) Disclosure and Transparency Rules of the following material interests in its share capital:

	Number of ordinary shares held	Percentage of issued share capital
AXA Framlington Investment Managers	**11,139,285**	14.22%
T Rowe Price Global Investments	**7,324,672**	9.35%
Legal & General Investment Management	**7,115,856**	9.08%
M&G Investment Management	**6,755,669**	8.62%
Oppenheimer Funds	**4,000,000**	5.11%
Aberdeen Standard Investments	**3,887,118**	4.96%
Baillie Gifford	**3,740,692**	4.78%
Schroder Investment Management	**3,607,743**	4.61%
Generation Investment Management	**3,586,998**	4.58%
Majedie Asset Management	**1,712,431**	2.19%

During the period 31 December 2017 to 21 March 2018, the Company received the following notifications pursuant to chapter five of the FCA's Disclosure and Transparency Rules:

On 7 March 2018 and 20 March 2018, the Company received notifications from Legal & General Assurance (Pensions Management) Limited (part of Legal & General Investment Management), advising that their interests in the total voting rights of the Company were 3,116,780 ordinary shares, being 3.98% of the issued share capital at 7 March 2018, and 3,303,412 ordinary shares, being 4.22% of the issued share capital at 20 March 2018. The overall Legal & General Investment Management interests in the total voting rights of the Company were 9.06% and 9.31% respectively of the issued share capital at the dates of notification.

Annual General Meeting

The notice convening the Annual General Meeting is set out on pages 135 to 138. Resolutions 1 to 11 set out in the notice of the meeting deal with the ordinary business to be transacted at the meeting. The special business to be transacted at the meeting is set out in Resolutions 12 to 14.

Re-election of Directors

Resolutions 5 to 10

The Company's Articles of Association require the Directors to retire by rotation at least once every three years, with the number to retire by rotation at each Annual General Meeting being the number nearest to but not exceeding one third of the Board. However, the UK Corporate Governance Code provides that all Directors of FTSE 350 companies should be subject to re-election by their shareholders every year. In accordance with this provision of the UK Corporate Governance Code and in keeping with the Board's aim of following best corporate governance practice, the Board has decided that, as at recent Annual General Meetings of the Company, all Directors should retire at each Annual General Meeting and offer themselves for re-election.

Directors' Remuneration report

Resolution 11

This Resolution seeks shareholder approval for the Directors' Remuneration report, which includes the remuneration policy. The Directors' Remuneration report can be found on pages 58 to 79 (inclusive) of the Annual Report and Financial Statements.

In accordance with regulations which came into force on 1 October 2013, Resolution 11 offers shareholders an advisory vote on the implementation of the Company's existing remuneration policy.

Authority to purchase own shares

Resolution 12

It is proposed by Resolution 12, by Special Resolution, to authorise the Company generally and unconditionally to purchase its own shares at a price of not less than the par value of the shares and not more than the higher of:

(i) 5% above the average of the middle market quotations of the shares as derived from the London Stock Exchange Daily Official List for the five dealing days immediately preceding the day on which the purchase is made; and

(ii) the amount stipulated by article 5(1) of the Buy-back and Stabilisation Regulation 2003 (in each case exclusive of any expenses payable by the Company).

The authority will be for a maximum of 14.9% of the Company's issued share capital and will expire at the earlier of the next Annual General Meeting of the Company or within 15 months from the date of the passing of this resolution. The Directors currently have no intention to exercise the authority and will only purchase shares if it is in the best interests of shareholders as a whole.

The total number of options to subscribe for ordinary shares outstanding at 21 March 2018 (including options awarded under LTIP which may be satisfied by subscription of new shares) was 2,946,231. This represents 4% of the issued ordinary share capital at that date. If Xaar plc was to buy back the maximum number of ordinary shares permitted pursuant to the passing of this resolution, then the total number of options to subscribe for ordinary shares outstanding at 31 December 2017 would represent 4% of the reduced issued ordinary share capital.

Power to issue securities

Resolution 13

Under the Companies Act 2006 the Directors of the Company may only allot shares (whether for cash or otherwise) with the authority of shareholders given at a general meeting of the Company. In accordance with institutional guidelines, under Resolution 13, to be proposed as an Ordinary Resolution, authority is sought to allot shares:

(i) in relation to a pre-emptive rights issue only, up to an aggregate nominal amount of £5,221,953.00, which represented two thirds of the Company's ordinary share capital as at 21 March 2018; and

(ii) in any other case, up to an aggregate nominal amount of £2,610,976.60, which represented one third of the Company's ordinary share capital as at 21 March 2018.

The Directors do not currently have an intention to exercise the authority.

REPORT ON THE AFFAIRS OF THE GROUP CONTINUED

Resolution 14
This resolution, to be proposed as a Special Resolution, will give the Directors power to allot shares:

(i) up to an aggregate nominal amount of £5,221,953.00 (representing approximately 66% of the Company's issued share capital) on an offer to existing shareholders on a pre-emptive basis (subject to any adjustments, such as for fractional entitlements and overseas shareholders, as the Directors see fit); and
(ii) for cash up to a maximum aggregate nominal value of £783,292.90, representing 10% of the ordinary share capital of the Company as at 21 March 2018, otherwise than in connection with an offer to existing shareholders.

In previous years, the Directors have sought, and been granted, power to allot equity securities for cash free from pre-emption rights (otherwise than in connection with a rights issue or similar pre-emptive issue) up to a maximum nominal amount representing approximately 5% of the Company's issued ordinary share capital. Such power has given the Directors the ability to allot equity securities for cash non pre-emptively in any circumstances. The limitation of the disapplication power to a maximum of 5% of the Company's issued ordinary share capital accorded with best practice as set out in The Pre-Emption Group's Statement of Principles on the Disapplication of Pre-Emption Rights (July 2008).

In March 2015, The Pre-Emption Group published a revision of its Statement of Principles. In addition to restating the existing 5% disapplication limit, the 2015 Statement of Principles introduced greater flexibility for companies to undertake non pre-emptive issues for cash in connection with acquisitions and specified capital investments. This relaxation is intended to allow companies the opportunity to finance expansion opportunities as and when they arise.

Accordingly, the 2015 Statement of Principles provides that a company may now seek power to issue on a non-pre-emptive basis for cash equity securities representing (i) no more than 5% of the Company's issued ordinary share capital in any one year; and (ii) no more than an additional 5% of the Company's issued ordinary share capital provided that such additional power is only used in connection with an acquisition or specified capital investment.

Accordingly, in line with the 2015 Statement of Principles (which have been endorsed by The Investment Association), the Directors are seeking power to allot equity securities for cash (otherwise than in connection with a rights issue or similar pre-emptive issue) up to a maximum nominal amount of £783,292.90, representing approximately 10% of the Company's issued ordinary share capital as at 21 March 2018 (being the latest practicable date prior to publication of this document). Whilst the Directors may use up to one half of this amount to issue equity securities for cash non pre-emptively in any circumstances, they confirm that they would only use the other half in connection with an acquisition or a specified capital investment which is announced contemporaneously with the issue, or which has taken place in the preceding six-month period and is disclosed in the announcement of the issue.

The Directors also confirm their intention to adhere to the provisions of the 2015 Statement of Principles regarding cumulative use of authorities within a rolling three year period. Those Principles provide that equity securities should not be allotted for cash on a non-pre-emptive basis (other than pursuant to a rights issue or pre-emptive offer) in excess of an amount equal to 7.5% of the total issued ordinary share capital of the Company in any rolling three year period, without prior consultation with the Company's shareholders. This limit excludes any equity securities issued pursuant to a specific disapplication of pre-emption rights and any equity securities issued pursuant to a general disapplication of pre-emption rights in connection with an acquisition or specified capital investment.

The Directors do not currently have an intention to exercise any power given to them by shareholders to allot shares for cash on a non-pre-emptive basis.

The authorities contained in Resolutions 13 and 14 will expire no later than 15 months after the passing of those resolutions.

Additional information for shareholders

The following provides the additional information required for shareholders as a result of the implementation of the Takeovers Directive into UK law.

The structure of the Company's issued share capital is shown in note 25.

Details of ordinary shares held in trust owned by the Company can be found in note 27.

The Company is not aware of any agreements between shareholders that may result in restrictions on the transfer of securities and/or voting rights.

The Directors are authorised to issue and allot shares and to undertake purchases of the Company's shares. Appropriate resolutions to renew these authorities are proposed to be passed at the AGM as detailed above and notice of which is on pages 135 to 138.

Ordinary shares

On a show of hands at a general meeting of the Company every holder of ordinary shares present in person and entitled to vote shall have one vote for every ordinary share held and, on a poll, every member present in person or by proxy and entitled to vote shall have one vote for every ordinary share held. The notice of the AGM on pages 135 to 138 specifies deadlines for exercising voting rights either by proxy notice or present in person or by proxy in relation to resolutions to be passed at the AGM. All proxy votes are counted and the numbers for, against or withheld in relation to each resolution are made available at the AGM and are published on the Company's website after the meeting. No person holds securities carrying special rights with regard to control of the Company.

Restrictions

There are no restrictions on the transfer of ordinary shares in the Company other than:

- Certain restrictions may from time to time be imposed by laws and regulations (for example, insider trading laws and market requirements relating to close periods)
- Pursuant to the Listing Rules of the FCA whereby all employees of the Company require the approval of the Company to deal in the Company's securities.

The Company's Articles of Association may only be amended by a Special Resolution at a general meeting of the shareholders. Directors are reappointed by Ordinary Resolution at a general meeting of the shareholders.

Appointment of Directors

The Board can appoint a Director but anyone so appointed must be elected by an Ordinary Resolution at the next general meeting. All Directors are required to submit themselves for reappointment every year at the AGM.

Significant interests

Directors' interests in the share capital of the Company are shown in the table on page 44. Major interests (i.e. those greater than 3%) of which the Company has been notified are shown on page 44.

Company share schemes

The Xaar plc ESOP Trust holds 1.7% of the issued share capital of the Company in trust for the benefit of employees of the Group and their dependants. The voting rights in relation to these shares are exercised by the Trustees.

Change of control

The Company is not party to any agreements which take effect, alter or terminate upon a change of control of the Company following a takeover bid. There are no agreements between the Company and its Directors or employees providing for compensation for loss of office or employment (whether through resignation, purported redundancy or otherwise) that occurs because of a takeover bid. Depending on the achievement of performance conditions, share-based payment arrangements may vest on change of control but this is subject to the approval and exercise of the discretion of the Remuneration Committee.

Going concern

The Group's business activities, together with the factors likely to affect its future development, performance and position are set out in the Strategic Report on pages 16 to 21 and 34. Notes 19, 20 and 23 include a description of the Group's objectives, policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments and hedging activities; and its exposure to credit risk and liquidity risk.

After making enquiries, the Directors have a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future, based on the Group's forecasts and projections for the next 12 months, taking account of reasonably possible changes in trading performance. For this reason, we continue to adopt the going concern basis in preparing the financial statements.

Directors' report continued

REPORT ON THE AFFAIRS OF THE GROUP CONTINUED

Viability statement

The long term viability of the Company is assessed by the Directors as part of the risk management process and regular strategic reviews. As well as continually monitoring and managing risk the Directors lead a comprehensive review of the principal risks to the Company at least annually. This review, which also involves key individuals from all areas of the business, was last performed in January 2018. The Company's strategy is regularly discussed by the Board and is biannually subject to a full review.

The Directors' assessment of the Company's viability has been made with reference to the strategic planning documented on pages 16 to 21 and 34. The Company's strategic plans are based on the four strategic pillars which underpin the Company's vision for 2020. Strategic plans for the whole Company and each of the pillars are updated taking into consideration assumptions concerning existing and future products and technology, customer engagements, business relationships, partnership opportunities and the commercial, technological and macro-economic risks. The strategic plan for the Company is approved by the Executive Committee which tracks both current and forecast performance against this plan.

The Company is aware that it operates in an uncertain environment and faces risks both internally and externally that could potentially impact on the Company's ability to achieve its strategy. The principal risks and uncertainties faced by the Company are included on pages 29 to 33. As part of the process of reviewing these risks, and other potential risks, the Board assigns responsibility for these to members of the Executive Committee. It is the responsibility of the Executive Committee members to manage the risk and the mitigating actions. This process is supplemented with strong internal controls and processes. This combination ensures that the Company manages the risks it faces appropriately and that these are considered in all of the financial models.

Taking account of the Company's current financial position, operating performance, and the principal risks and uncertainties, the Directors have assessed the prospects of the Company, and confirm that they have a reasonable expectation that the Company will be able to continue in operation and meet its liabilities as they fall due for the next four years, to December 2021.

Auditor

Deloitte LLP have expressed their willingness to continue in office as auditor and a resolution to reappoint them will be proposed at the forthcoming AGM.

Directors' statement as to disclosure of information to auditor

The Directors who were members of the Board at the time of approving the Directors' report are listed on page 43.

Having made enquiries of fellow Directors, each of these Directors confirm that:

- To the best of each Director's knowledge and belief, there is no information relevant to the preparation of their report of which the Group's auditor is unaware
- Each Director has taken all the steps a Director might reasonably be expected to have taken to be aware of relevant audit information and to establish that the Group's auditor is aware of that information.

This confirmation is given and should be interpreted in accordance with the provisions of section 418 of the Companies Act 2006.

Approval

The Directors' report was approved by the Board on 21 March 2018 and is signed on its behalf by:

Lily Liu
Chief Financial Officer and
Company Secretary

Governance

CORPORATE GOVERNANCE STATEMENT

The Company is committed to the principles of corporate governance contained in the 2016 UK Corporate Governance Code which was issued in April 2016 by the Financial Reporting Council ('the Code') for which the Board is accountable to shareholders.

Application of the main principles of the Code

The Company has applied the principles of the Code, including both the Main Principles and the supporting principles. An explanation of how the Main Principles have been applied is set out below.

A. Leadership

A1. The Board's role

The Board is responsible for the formulation of strategy; the monitoring of financial and non-financial performance and the approval of major transactions; financial statements; other formal communications with shareholders; and operating and capital expenditure budgets.

Comprehensive Board papers dealing with all aspects of the business are distributed by the Company Secretary typically one week in advance of each Board meeting.

The Board met seven times during the year.

A2. A clear division of responsibilities

There exists a clear division of responsibilities between the Chairman and the Chief Executive. The Chairman's primary role includes ensuring the Board functions properly, that it meets its obligations and responsibilities, and that its organisation and mechanisms are in place and are working effectively.

The Chief Executive's primary role is to provide overall leadership and vision in developing, with the Board, the strategic direction of the Company. Additionally, the Chief Executive is responsible for the management of the overall business to ensure that strategic and business plans are effectively implemented, the results are monitored and reported to the Board, and financial and operational objectives are attained.

The Board delegates management of the business to the Executive Committee, headed by the Chief Executive Officer. The Executive Committee meets weekly and is responsible for implementing Group strategy, monitoring business performance, preparing the operating and capital expenditure budgets for recommendation to the Board, and ensuring efficient management of the Group.

A3. Role of the Chairman

The Chairman sets the agendas for Board meetings, manages the meetings (in conjunction with the Company Secretary) and facilitates open and constructive dialogue during them.

A4. Role of the Non-Executive Directors

The Non-Executive Directors attend the Board meetings, and form the Audit, Remuneration and Nomination Committees. They are responsible for scrutinising the performance of management and determining appropriate levels of remuneration of Executive Directors. They also have a key role in appointing and, where required, removing Executive Directors.

CORPORATE GOVERNANCE STATEMENT CONTINUED

B. Effectiveness

B1. The Board's composition

The Nomination Committee is responsible for regularly reviewing the composition of the Board. In recommending appointments to the Board, the Nomination Committee considers the range of skills, knowledge and experience required, taking into account the benefits of diversity on the Board, including gender.

The Board of Directors comprises the Chairman, three Executive Directors and three Non-Executive Directors.

The Board considers Margaret Rice-Jones, Chris Morgan and Andrew Herbert to be independent within the meaning of the Code. To be considered independent each Non-Executive Director is sufficiently separate to management and free from any business or other relationships which could affect their judgement, impartiality or objectivity.

B2. Board appointments

The appointment of new Directors is led by the Nomination Committee. Further details of the activities of the Nomination Committee can be found on page 56.

B3. Time commitments

On appointment, Directors are notified of the time commitment expected from them. External directorships, which may affect existing time commitments, must be agreed with the Chairman.

B4. Induction, training and development

When new Directors are appointed, they receive a complete and specially bespoke induction and training programme aimed at introducing and familiarising them to the management team, the Group's activities and processes, and to give them the knowledge required to effectively execute their role.

B5. Provision of information and support

The Chairman, in conjunction with the Company Secretary, ensures that all Board members receive accurate and timely information.

B6. Board and committee performance evaluation

The Board's policy for individual Director performance review is for a formal and rigorous appraisal process based on performance by the individual Director against specific targets. Individual Director performance is reviewed at least annually. The Senior Independent Director, in consultation with the other Non-Executive Directors and taking into account the views of the other Directors, appraises the performance of the Chairman. The Executive Directors, in consultation with the Chairman, appraise the performance of the Non-Executive Directors.

The Board reviewed both its own performance and the performance of the Board committees once during the year through a questionnaire issued to all members of the Board. The results were reviewed by the Board as a whole and it was concluded that individual Board members are satisfied that the Board works well and operates effectively in an environment where there is constructive challenge from the Non-Executive Directors. They are also satisfied with the contribution made by their colleagues and that Board committees operate properly and effectively. It is the Board's intention to review its own performance, and that of its committees, at least once a year.

B7. Re-election of Directors

All Directors were subject to shareholder election or re-election at the 2016 AGM, as will be the case at the 2017 AGM.

C. Accountability

C1. Financial and business reporting

The Board has established arrangements to ensure that reports and other information published by the Group are fair, balanced and understandable. The Strategic Report, set out on pages 4 to 39, provides information about the performance of the Group, the business model, the Group's strategy and the risks and uncertainties relating to the Group's future prospects.

C2. Risk management and internal control systems

The Group's policies relating to risk management and internal control can be found in the 'Risk management' section of the Strategic Report on pages 29 to 33.

The Committee has formally identified the Chief Operating Officer as the Director responsible for health and safety and the Chief Financial Officer as Director responsible for risk assessment.

C3. Role and responsibilities of the Audit Committee

The role and responsibilities of the Audit Committee are set out in the Audit Committee section on pages 54 to 55.

D. Remuneration

D1. Levels and elements of remuneration

The Remuneration Committee sets levels of remuneration which are designed to promote the long term success of the Group and structures remuneration so as to link it to both corporate and individual performance, thereby aligning management's interests with those of shareholders.

D2. Development of remuneration policy

Details of the activities of the Remuneration Committee can be found in the Remuneration Committee section on page 57 and in the Directors' Remuneration report on pages 58 to 79.

E. Relations with shareholders

E1. Shareholder engagement and dialogue

The Directors seek to build on a mutual understanding of objectives between the Group and its institutional shareholders by meeting at least twice per year, following interim and annual results, to provide an update on trading and obtain feedback. Additionally, the Group has hosted institutional investors at its Cambridge and Huntingdon offices during the year.

The Group's financial public relations advisors and lead brokers give all investors and potential investors who have met with the Group's investor relations team, the opportunity to provide feedback on the meetings. Additionally, the Chief Executive Officer and the Chief Financial Officer provide feedback to the Board at the meeting following shareholder meetings to ensure that the Board, and in particular the Non-Executive Directors, possess an understanding of the views of the Company's major shareholders. Both the Chairman and the Senior Independent Director are available to meet with shareholders as required.

Shareholders can access up-to-date Company information from the Investors section of the Xaar website at www.xaar.com.

E2. Constructive use of the AGM

The Board uses the AGM to communicate with investors and to encourage their participation.

CORPORATE GOVERNANCE STATEMENT CONTINUED

Summary of Board meeting attendance in 2017

Seven Board meetings were held in 2017.

Name	Meetings attended
Lily Liu*	5 (5)
Robin Williams	7 (7)
Margaret Rice-Jones	7 (7)
Doug Edwards	7 (7)
Alex Bevis*	2 (2)
Ted Wiggans	7 (7)
Chris Morgan	7 (7)
Andrew Herbert	7 (7)

* Lily Liu joined the Board on 2 May 2017 as Chief Financial Officer. Alex Bevis resigned as Chief Financial Officer on 29 March 2017.

Figures in brackets denote the maximum number of meetings that could have been attended.

Board committees

Summary of committee membership:

Name	Audit Committee	Remuneration Committee	Nomination Committee
Robin Williams	Yes	Yes	Chairman
Margaret Rice-Jones	Yes	Chairman	Yes
Chris Morgan	Yes	Yes	Yes
Andrew Herbert	Chairman	Yes	Yes
Doug Edwards	No	No	Yes

Summary of committee meeting attendance in 2017:

Name	Audit Committee	Remuneration Committee	Nomination Committee
Number of meetings held	4	4	2
Robin Williams	4 (4)	4 (4)	2 (2)
Margaret Rice-Jones	4 (4)	4 (4)	2 (2)
Chris Morgan	4 (4)	4 (4)	2 (2)
Andrew Herbert	4 (4)	4 (4)	2 (2)
Doug Edwards	N/A	N/A	2 (2)

Figures in brackets denote the maximum number of meetings that could have been attended.

Conflicts of interest

Following the changes made to the Company's Articles of Association to incorporate the provisions of section 175 of the Companies Act 2006 which gave boards the statutory power to authorise conflicts of interest, any potential conflict of interest is approved by the Board in advance of any action or appointment that could result in a conflict of interest arising. Each member of the Board is familiar with the procedure to follow in relation to conflicts of interest and the process is operated efficiently.

Group structure

The Group has three main locations. The head office functions, R&D, EMEA sales, marketing, human resources, finance, IT and facilities are based in Cambridge, UK. The Group also has two manufacturing facilities: one in Huntingdon, UK, and the other in Vermont, USA. The Swedish manufacturing facility closed in 2016. The Group also has representatives in other global locations including India and Hong Kong.

Refer to page 14 for the Xaar business model.

Whistle-blowing, and anti-bribery and corruption policies

The Company conducts its business with the highest standards of integrity and honesty at all times and expects its employees to maintain the same standards in everything they do. Employees are therefore required to report any wrongdoing by Xaar or its members of staff that falls short of these principles. The whistle-blowing, and anti-bribery and corruption policies are available and communicated to all employees via the Company intranet, and all employees confirm in writing that they have read and comply with the whistle-blowing and anti-bribery and corruption policies. All reported incidences of actual or suspected bribery or corruption will be promptly and thoroughly investigated and dealt with appropriately.
The purpose of the anti-bribery and corruption policy is to protect Xaar and its employees from breaches of anti-bribery and corruption laws. Xaar does not tolerate any employee or third party being involved in any level of bribery or corruption. Xaar is committed to complying with applicable anti-bribery and corruption laws in all countries in which it conducts business.

Statement of compliance with the Code

Throughout the year ended 31 December 2017 the Company has followed the provisions set out in the Code.

The Board confirms the 2017 Annual Report and Financial Statements, taken as a whole, is fair, balanced and understandable, and provides the information necessary for shareholders to assess the performance, strategy, and business model of the Company.

Approval

The Corporate Governance statement was approved by the Board on 21 March 2018 and is signed on its behalf by:

Lily Liu
Chief Financial Officer and
Company Secretary

AUDIT COMMITTEE

Andrew Herbert
Chairman of the Audit Committee

Governance

The Audit Committee (the 'Committee') is appointed by the Board from the Non-Executive Directors of the Company. The Chairman of the Committee, Andrew Herbert, is deemed by the Board to have recent and relevant financial experience as he was, until 2015, CFO of FTSE listed Domino Printing Sciences plc and is a Fellow of the Institute of Chartered Management Accountants.

The Committee's terms of reference were revised and updated in March 2017 and include all matters indicated by Disclosure and Transparency Rule 7.1 and the UK Corporate Governance Code. The written terms of reference of the Committee are available on request from the Company Secretary.

Please see the tables on page 52 for details of the Committee members in the year and the number of Committee meetings attended. The Committee meetings are also attended, by invitation, by the Group Chief Executive Officer, the Chief Financial Officer and other senior financial management as appropriate, as well as by the external auditor for specific parts of the meeting.

Report from the Committee Chairman

I am pleased to present the Audit Committee's report describing our work during the past year. Deloitte LLP was reappointed as the Company's auditor at the Annual General Meeting and Paul Schofield has continued as engagement partner.

The Audit Committee's primary responsibilities are:

- To approve and monitor key financial and accounting policies and practices
- To monitor the integrity of the financial statements, announcements and review significant financial reporting judgements contained therein
- To keep under review the adequacy and effectiveness of internal controls
- To review procedures, systems and controls for whistle blowing, fraud detection and bribery prevention
- To review, approve and monitor internal audit activities
- To monitor and review the Group's external auditor's independence, objectivity and effectiveness
- To make recommendations to the Board on the appointment, remuneration and terms of engagement of the external auditor.

The Committee is not responsible for the identification of key risks or the review of the adequacy of arrangements to mitigate those risks, which remains the responsibility of the main Board.

The Committee is required to report its findings to the Board at least annually, identifying any matters on which it considers that action or improvement is needed, to make recommendations on the steps to be taken, and to ensure that the required actions are taken.

Significant issues considered by the Committee

The Committee has a work plan that is designed to ensure its responsibilities are fully discharged over the annual reporting cycle. Specific items are added to the agenda for individual meetings as required. Significant accounting matters considered during the year include revenue recognition and adoption of IFRS 15, the adequacy and appropriateness of certain provisions, inventory valuation and capitalisation of development costs under IAS 38. Other matters considered include royalty arrangements, tax policy, financing and debt arrangements and various compliance matters.

In response to changing currency exposure arising from new partnerships and the acquisition of EPS, the Committee reviewed and adopted a revised treasury policy. The new policy provides appropriate range and flexibility to hedge expected non-sterling denominated net cash inflows to the Group.

In August the Committee reviewed and adopted a revised internal audit policy. The policy now includes the use of internal resources for process and systems audits, increasing engagement from the finance teams and encouraging cross-site learning and sharing of best practice. This augments the use of third party internal audit resources.

Key activities

In discharging its responsibilities the Committee has completed the following activities:

Financial statements and reports

- Reviewed the Annual Report and financial statements and the half-yearly financial report including disclosures made therein
- Reviewed reports from the external auditor on their work and findings
- Reviewed the effectiveness of the Group's internal control environment.

Internal controls and compliance

- Agreed a schedule of internal audit activities, and reviewed the results of internal audit activities performed
- Reviewed the internal financial controls and risk management systems
- Reviewed fraud detection and the systems and controls for the prevention of bribery.

External audit

- Reviewed and agreed the scope of the audit work to be undertaken by the auditor, and reviewed non-audit services provided and the level of this work compared with the audit services provided
- Agreed the fees to be paid to the external auditor relating to their services rendered for the annual audit and interim review
- Reviewed audit work performed on significant risk areas, including those areas identified and discussed by the external auditor in their report, and ensured the independence and objectivity of the external auditor.

The Chairman of the Audit Committee will be available at the AGM to answer any questions about the work of the Committee.

External auditor

Deloitte LLP have been the Company's auditor since 2009 and there has been no tender held for audit services during that time. The Committee considers that the auditor's knowledge of the Group's business and systems gained through experience has contributed to the effectiveness of the audit process. The Committee intends the Company to continue to comply fully with the FRC Audit Committees Guidance regarding the frequency of audit tender. Under the standard rotation process, a new audit engagement partner was appointed from 2014.

The Committee has noted that there are no contractual obligations to restrict the choice of external auditor and has considered the likelihood of a withdrawal of the auditor from the market. The Committee meets with the Company's auditor at least twice a year. The Chief Executive Officer and Chief Financial Officer, and other relevant managers as required, attend by invitation, except for a period of each meeting where the Committee members may meet with the auditor without any member of the Group management present.

The Committee is required to assess the qualifications, expertise, resources, and independence of the external auditor, and the objectivity and effectiveness of the audit process. The Committee reviews the type of work, effectiveness of, and level of fees charged by the auditor on an annual basis and recommends to the Board the appointment, reappointment, term, remuneration, and terms of engagement of the external auditor. Auditor objectivity and independence is safeguarded by the committee monitoring fees paid to the auditor in respect of both audit and non-audit work, and approving all additional work performed by the external auditor. Non-audit services include remuneration services, tax and audit advisory.

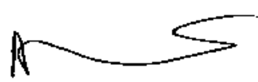
In July the Committee adopted an updated policy in relation to the provision of non-audit services by the external auditor. As set out in the Policy, it is the policy of the Group not to engage the Statutory auditor in any non-audit related services. This includes tax services. Specifically, the Policy states that the preparation of tax forms, payroll tax, calculation of indirect tax and the provision of tax advice cannot be provided by the Statutory auditor. Prior to the adoption of this policy, Deloitte LLP the Statutory auditor were responsible for the preparation of tax returns, PAYE returns, VAT returns and the provision of tax advice for the Group's two Swedish subsidiary companies. As a result of this policy, it was decided that Deloitte LLP can no longer provide these services.

Note 7 to the Consolidated financial statements includes disclosures of the auditor's remuneration for the year.

The Committee, taking into consideration relevant UK professional and regulatory requirements, regularly considers the independence and objectivity of the auditor. The Committee receives an annual statement from the auditor detailing their independence policies and safeguards, and confirming their independence, taking into account relevant ethical guidance regarding the provision of non-audit services by the external auditor.

The Committee considers the effectiveness of the external audit and the Group's relationship with the external auditor, Deloitte LLP, on an ongoing basis, and have conducted a review of the effectiveness of the annual audit. This review consisted of considering a number of key points together with the senior financial management of the Group, without the external auditor present, and then discussing the evaluation with the auditor. The Committee was able to conclude, on the basis of this exercise and its experience over the year, that the external audit process remained effective.

A further review will be carried out following the completion of audit procedures on all Group companies and reported on in next year's Annual Report.



Andrew Herbert
Chairman of the Audit Committee

Governance continued

NOMINATION COMMITTEE

Robin WIlliams
Chairman of the Nomination Committee

Governance

The Nomination Committee is appointed by the Board from the Non-Executive Directors of the Company and the Chief Executive Officer. The Chairman of the Committee is Robin Williams. The Committee meets as required. The written terms of reference of the Committee are available on request from the Company Secretary.

Responsibilities

The Nomination Committee's primary responsibilities are:

- Reviewing the size, structure, skills, knowledge and composition of the Board
- Formulating plans for succession for both Executive and Non-Executive Directors
- Making recommendations to the Board on the appointment of new Executive and Non-Executive Directors and their reappointment following retirement by rotation.

Boardroom diversity

Recruitment of Board candidates is conducted, and appointments made, on merit and suitability against objective selection criteria with consideration of, amongst other things, the benefits of diversity on the Board, including gender. The Board has not set a diversity quota, however the Board encourages applications for roles being recruited from women subject to the selection criteria being met. Following the appointment of Lily Liu to the Board on 2 May 2017, the gender ratio is 29% female versus 71% male.

Key issues and activities

The process adopted by the Committee to identify a candidate for a specific vacancy is, in the first instance, to determine whether any individuals known to the Committee would be suitable for the role. If no candidates can be identified through this process then an external search consultancy will be approached.

Shortlisted candidates are interviewed by members of the Committee and other Executive and Non-Executive Directors as the Committee deems appropriate. Once a suitable candidate has been identified, the Chairman of the Committee will recommend to the Board that the Company make a formal offer of employment to the candidate.

During the year, Lily Liu was appointed as new Chief Financial Officer and Company Secretary on 2 May 2017.

All Directors are required to submit themselves for reappointment every year at the AGM.

RHW Williams

Robin Williams
Chairman of the Nomination Committee

GOVERNANCE

REMUNERATION COMMITTEE

Margaret Rice-Jones
Chairman of the Remuneration Committee

Governance

The Remuneration Committee is appointed by the Board from the Non-Executive Directors of the Company. The Chairman of the Committee is Margaret Rice-Jones. The Chief Executive Officer and Chief Human Resources Officer attend meetings by invitation, except when their own remuneration package is being discussed. The written terms of reference of the Committee are available on request from the Company Secretary.

Responsibilities

The Remuneration Committee's primary responsibilities are:

- To make recommendations to the Board on the Group's policy for executive remuneration, and review the ongoing appropriateness and relevance of the policy
- To review the design of all share incentive plans and oversee any major changes in employee benefit structures
- To monitor the level and structure of remuneration for senior managers
- To determine the individual remuneration packages on behalf of the Board for the Executive Directors of the Group.

Key issues and activities

The Committee has access to professional advice, both inside and outside the Company, in the furtherance of its duties.

A new policy was adopted at the AGM in May 2017. Therefore the main activities of the Committee this year have been to ensure the direct linkage between the 2020 vision and the remuneration of Directors, along with considering and applying the new guidance available to the Committee from shareholder bodies, government and other stakeholders.

The Directors' Remuneration report sets out in more detail the Committee's policies and practices on executive remuneration.

Margaret Rice- Jones
Chairman of the Remuneration Committee

Governance continued

DIRECTORS' REMUNERATION REPORT

Statement from the Chairman of the Remuneration Committee

Dear Shareholder

On behalf of the Board, I am pleased to present the 2017 Remuneration report. This covers the actual amounts earned by Directors for the year ended 31 December 2017 and a forward looking guide to the minimal changes proposed to the performance measures within the Annual Bonus and Long Term Incentive plans.

The Committee's goals are to support the drive to deliver the 2020 vision by:

- Attracting and retaining management of the highest calibre
- Providing incentives that reward near and longer term achievement that are clearly linked to performance
- Offering competitive packages comparable to those offered by companies similar to Xaar in terms of size and complexity
- Being considerate to the climate for pay restraint, with awards biased towards delivery of sustainable long term growth
- Taking into account the views of our shareholders.

Remuneration for 2017

Despite the success in diversification of market segments during 2017 it was a challenging year for the Company as the Ceramics market continued to decline and delays were experienced in the manufacturing ramp of the new Thin Film 5601 product. Strong progress was made in the introduction of new products and we gained market share in certain key segments.

During the year we were pleased to welcome Lily Liu to the Board as she succeeded Alex Bevis as Chief Financial Officer.

Annual bonus payments

Following the profit warning in late 2017 no bonus payments will be made to employees or Directors (excluding Lily Liu – see below). The Committee considers this appropriate given the performance of the underlying business. We were disappointed with the slower than expected adoption of some of our new products and also the increased competition and maturity in ceramics hence the Board agreed it was not appropriate to pay a bonus for 2017 as the revenue and profit targets, set without the inclusion of the SII licence arrangement, were not met.

As part of the agreement of her remuneration before joining, Lily Liu was offered a pro-rata guaranteed bonus of 50% of her maximum entitlement for 2017 only.

Existing LTIP grants

The LTIP granted in 2015 are expected to vest. Cumulative EPS over the three year performance period ending 31 December 2017 was 43.6 pence leading to vesting of 36.7% on that element of the grant. Threshold vesting was at 38 pence and maximum at 74 pence. Aon Hewitt has independently calculated the Relative TSR measured against the TechMARK. This was approaching the upper quartile leading to vesting of 90.85% on that element. Threshold vesting was at median performance relative to the index and maximum vesting at upper quartile. Total vesting is 55% of maximum entitlement.

All terms of the 2016 and 2017 grants remain unchanged.

Leading remuneration decisions for 2018

The policy was renewed with a binding vote at the AGM in May 2017. The Committee has exercised their discretion which is in accordance with the policy.

For 2018 remuneration links directly to the goals laid out for the pillars of the 2020 vision.

Base salary

An Executive Director's basic salary is set on appointment and reviewed annually or when there is a change in position or responsibility.

When determining an appropriate level of salary, the Committee considers:

- general salary rises to employees
- remuneration practices within the Company
- any change in scope, role and responsibilities
- the general performance of the Company
- the experience of the relevant Director
- the economic environment
- when the Committee determines a benchmarking exercise is appropriate (normally every three years) salaries within the ranges paid by the companies in the comparator groups used for remuneration benchmarking.

Individuals who are recruited or promoted to the Board may, on occasion, have their salaries set below the targeted policy level until they become established in their role. In such cases subsequent increases in salary may be higher than the general rises for employees until the target positioning is achieved. It is proposed to increase the base salaries of Doug Edwards and Lily Liu by 3% from 1 July 2018 subject to continued performance. This level is within the range of increases for the general employee base. Ted Wiggans will not receive an increase.

Bonus

Introduction of new performance measure

For Doug Edwards only it is proposed to introduce a cash element to the bonus scheme for 2018.

In this year the weighting of his bonus elements will be:

- Profit 53%
- Revenue 35%
- Cash 12%

The Company considers its performance targets to be commercially sensitive information but as in past years will fully disclose the exact measurements retrospectively in the event of any payout.

Long term incentives

Three Year cumulative EPS targets

Threshold vesting will be at 39 pence. The minimum target is set by achievement of clear progress and growth over the 2017 results. The maximum target is set by achievement of very significant improvement and the trends implicit in the 2020 vision. This level will be 62 pence.

Revenue targets

Threshold vesting will be at £130 million. The minimum target is set by achievement of clear progress and annual growth of 9.09% over the 2017 results. The maximum target is set by achievement of very significant improvement and the trends implicit in the 2020 vision. This level will be £200 million and represents compound annual growth of 30%.

Introduction of a new performance measure and weighting of existing measures

During 2017 we commenced amortisation of the development of the Thin Film platform as we moved to the phase of product introduction. Over the last five years Xaar has capitalised £31.5 million in the development of this platform. The Committee believes that it is now appropriate to start to reward Executive Directors for delivering returns on this and other product investments.

In order to achieve this we propose to introduce a new measure for LTIP vesting covering new product sales performance. This would measure the sales in 2020 for products based on the new Thin Film platform (5601) and also the Advanced Manufacturing category that includes 3D printing. This directly measures success in two of our critical pillars and the returns made from our recent R&D investment.

The weighting of the three measures for LTIP vesting will be:

- Three year cumulative EPS 50%
- Revenue 30%
- Thin Film new product sales performance 20%.

All other terms remain unchanged from the 2017 plans.

UK Corporate Governance Code

The Committee has also considered the guidance of the UK Corporate Governance Code. Malus and clawback provisions have been in place for sometime and are unaltered. The Committee introduced post vesting holding periods in the policy review last year and also increased the minimum target shareholding holding requirements to 200%, these are all considered appropriate for a company of the size of Xaar.

We remain committed to openly reporting the details of our Director pay arrangements and to consulting with shareholders on any changes as required. We will continue to maintain a dialogue with investors regarding our disclosures to ensure we clearly communicate our arrangements as far as possible without it impacting our commerciality. If you would like to discuss any aspect of this report, I would be happy to hear from you. You may contact me through Lily Liu, Company Secretary or Karen Leahy, who provides support to Non-Executive Directors.

Margaret Rice-Jones
Chairman of the Remuneration Committee

21 March 2018

DIRECTORS' REMUNERATION REPORT CONTINUED

Annual report on remuneration

This part of the report sets out the actual payments made by the Company to its Directors with respect to the year ended 31 December 2017.

The Remuneration Committee's policy is to attract and retain individuals of the highest calibre by offering remuneration competitive with comparable publicly listed companies, and to drive Company performance by providing arrangements which fairly and responsibly reward individuals for their contribution to the success of the Group. Performance related bonuses and equity-based remuneration represent a substantial proportion of Executive Directors' potential remuneration.

Single figure table

The aggregate remuneration provided to Directors who have served as Directors in the year ended 31 December 2017 is set out below, along with the aggregate remuneration provided to such Directors for the financial year ended 31 December 2016.

Director	Salary/fees[(a)] £'000	Benefits[(b)] £'000	Bonus[(c)] £'000	Long term incentives[(d)] £'000	Pension[(e)] £'000	Total remuneration £'000
Year ended 31 December 2017						
Executive						
Doug Edwards	330	56	–	175	33	594
Lily Liu[1]	152	36	77	18	15	298
Alex Bevis[2]	48	5	–	73	5	131
Ted Wiggans	230	24	–	106	23	383
Non-Executive						
Robin Williams (Chairman)	100	–	–	–	–	100
Margaret Rice-Jones	47	–	–	–	–	47
Chris Morgan	43	–	–	–	–	43
Andrew Herbert	46	–	–	–	–	46
Year ended 31 December 2016						
Executive						
Doug Edwards	307	50	39	2	31	429
Jim Brault[3]	36	5	5	–	2	48
Alex Bevis	182	21	24	2	18	247
Ted Wiggans	230	24	29	–	23	306
Non-Executive						
Phil Lawler (Chairman)[4]	59	–	–	–	–	59
Margaret Rice-Jones	44	–	–	–	–	44
Chris Morgan	42	–	–	–	–	42
Andrew Herbert[5]	25	–	–	–	–	25
Robin Williams[4]	57	–	–	–	–	57

1 Lily Liu joined the Board on 2 May 2017.
2 Alex Bevis stepped down from the Board on 29 March 2017.
3 Jim Brault stepped down from the Board on 16 March 2016.
4 Phil Lawler stepped down from the Board on 30 September 2016 and Robin Williams was appointed Chairman.
5 Andrew Herbert joined the Board on 1 June 2016.

The figures in the single figure table on page 60 are derived from the following:

(a) Salary/fees	The amount of base salary/fees received in the year.
(b) Benefits	This is the taxable value of benefits and the flexible benefits allowance received in the year. This includes any relocation allowance claimed in 2017.
(c) Bonus	The value of the bonus earned in respect of the year. The bonus paid to Lily Liu was agreed as part of her remuneration before joining in recognition of the fact that she was unable to fully assess the likelihood of results or influence target setting of the business prior to joining.
(d) Long Term Incentives	The value of performance related incentives vesting in respect of the financial year and the value of SAYE options and Matching Shares under the HMRC approved Share Incentive Plan (SIP) granted based on the fair value of the options/shares at grant. The performance condition for the Performance Share Awards granted under the LTIP on 2 April 2015 was a cumulative EPS amount delivered over the three year performance period ending 31 December 2017 plus a relative TSR measure. For the year ended 31 December 2017, the Company's EPS achieved 43.6 pence over the three year performance period commencing 1 January 2015 and ending 31 December 2017, and Xaar was ranked 12th against the 41 companies in the FTSE TechMARK Index during the performance period. This will result in 55% of the granted LTIPs vesting in April 2018. For the year ended 31 December 2016 comparative figures, none of the Performance Share Awards and Matching Share Awards in respect of the year ending 31 December 2016 vested. Also included in the long term incentives figure are: • SAYE options granted in the year, valued at the accounting value on date of grant.
(e) Pension	The value of the employer contribution to the defined contribution pension plan (or the value of a salary supplement paid in lieu of a contribution to this pension plan).

Individual elements of remuneration

Base salary and fees

Base salaries for Executive Directors were reviewed by the Remuneration Committee prior to the beginning of each year and when an individual changes position or responsibility. From 2016, the annual review was effective from 1 July. In deciding appropriate levels, the Remuneration Committee considers the role, responsibility, and experience of the individual, corporate and individual performance, market conditions, and the range of salary increases awarded across the Group.

The Remuneration Policy for the Non-Executive Directors is reviewed periodically.

Benefits

Benefits principally comprise a car allowance, private medical insurance and basic levels of other insurances (such as income protection cover). In addition, Executive Directors are provided with an allowance of 5% of base salary which they can apply to a range of benefits such as life insurance and critical illness insurance.

DIRECTORS' REMUNERATION REPORT CONTINUED

Pension

The Company operates a self-administered, defined contribution, HMRC approved pension scheme. All current Executive Directors participate in this scheme. In appropriate circumstances, Executive Directors may take a salary supplement instead of contributions into a pension plan. This salary supplement does not form part of salary for the purposes of calculating any other entitlement under the policy. Non-Executive Directors do not receive pension contributions.

Annual bonus

For the year ended 31 December 2017 the annual bonus was based on performance against a Group profit target, which was not achieved for 2017. As a consequence, an annual bonus will not be paid for 2017.

To facilitate the appointment of our new CFO, Lily Liu, she was offered a guaranteed amount equal to her on-target bonus (pro-rated to start date). This will result in a payment of £76,877 in March 2018.

The Board considers the Group profit target to be a matter that is commercially sensitive. The Board believes that the advance disclosure of this commercially sensitive information could negatively impact the Company's competitive position by providing our competitors with insight into our business plans, expectations and our strategic actions resulting in significant risk to future profitability and shareholder value. It will however disclose targets retrospectively in relation to any bonuses paid.

For 2017 the two bonus targets were set as revenue and adjusted profit before tax. For revenue the threshold was set at £103 million and the on target performance was £115 million; the minimum threshold was not met. For adjusted profit before tax the threshold was £9 million and the on target performance was £12.2 million. This target was set for performance in the underlying business and did not include the SII licence arrangement when it was set and hence the Board agreed that the target conditions had not been met.

Long term incentives awarded during the financial year

The table below outlines awards made under the LTIP to Executive Directors in 2017:

		Award basis	Performance condition	Number of shares	Face value of the award £'000	Vesting at EPS & Revenue threshold	Performance period	Vesting date
16 May 2017	Doug Edwards	Performance Share plan Awards	EPS	76,580	283	25% of award	1 January 2017 to 31 December 2019	16 May 2020
			TSR	127,634	473			16 May 2020
			Revenue	51,053	189			16 May 2020
16 May 2017	Lily Liu		EPS	37,277	138			16 May 2020
			TSR	31,065	115			16 May 2020
			Revenue	24,851	92			16 May 2020
16 May 2017	Ted Wiggans		EPS	37,277	138			16 May 2020
			TSR	31,065	115			16 May 2020
			Revenue	24,851	92			16 May 2020
16 May 2017	Lily Liu	Buy out of grant on joining	Profit	31,979	120	n/a	16 May 2017 to 31 March 2019	16 May 2020

The share prices used to calculate the face value of the Performance Share award was £3.702 being the mid-market prices on the days prior to award date and £3.7525 for the buy-out grant award which was the average on 16 May 2017.

The performance conditions for the LTIP and awards are described in full on pages 125 to 126.

Shareholding guidelines and total shareholdings of Directors

On 16 May 2017, the Remuneration Committee introduced a shareholding guideline of 2x salary. Executive Directors will be expected to move towards the new guidelines as new grants vest. The extent to which each Executive Director has met the shareholding guideline is shown in the table below:

Name	Shareholding guidelines	Current shareholdings (% of salary)	Type	Owned outright	Vested	Unvested: Subject to performance conditions	Unvested: Not subject to performance conditions	**Total as at 31 December 2017**
Executive Directors								
Doug Edwards	200% of salary	33,031 (35%)	Shares	33,031	–	–	–	**33,885**
			LTIP options	–	–	449,164	–	**449,164**
			SAYE options	–	–	–	4,316	**4,316**
			Matching SIP	–	–	–	854	**854**
Lily Liu	200% of salary	14,000 (23%)	Shares	14,000	–	–	–	**14,000**
			LTIP options	–	–	125,172	–	**125,172**
			SAYE options	–	–	–	5,232	**5,232**
Ted Wiggans	200% of salary	70,749 (115%)	Shares	70,749	–	–	–	**70,749**
			LTIP options	–	–	185,088	–	**185,088**
			SAYE options	–	–	–	5,325	**5,325**
			Matching SIP	–	–	–	490	**490**
Alex Bevis[1]	200% of salary	58,017 (110%)	Shares	58,017	–	–	–	**58,017**
			LTIP options	–	–	60,672	–	**60,672**
Non-Executive Directors								
Robin Williams (Chairman)	–	–	Shares	10,000	–	–	–	**10,000**
Margaret Rice-Jones	–	–	Shares	5,700	–	–	–	**5,700**

1 Alex Bevis stepped down from the Board on 29 March 2017. Lapsing occurred at the point of stepping down. Refer to payments to past Directors for more detail on page 65.

There have been no changes in the Directors' holdings in the share capital of the Company, as set out in the table above, between 31 December 2017 and 21 March 2018.

Governance continued

DIRECTORS' REMUNERATION REPORT CONTINUED

Outstanding Directors' share awards

The awards held by Executive Directors of the Company under the LTIP are shown below:

LTIP

The outstanding awards granted to each Executive Director of the Company under the Xaar plc 2007 and 2017 LTIP are as follows. All options under the LTIP are nil-cost options such that no exercise price is payable. The performance conditions for these LTIP awards are described in full in note 32.

Name	As at 1 January 2017	Granted during the year	Exercised during the year	Lapsed during the year	**As at 31 December 2017**	Grant date	Share price at date of grant	Earliest date of exercise	Expiry date
Doug Edwards	73,305	–	–	–	**73,305**	2 April 2015	£4.09	2 April 2018	2 April 2025
	61,539	–	–	–	**61,539**	1 April 2016	£4.875	1 April 2019	1 April 2026
	11,494[3]	–	–	–	**11,494**	11 May 2016	£4.93	11 May 2019	11 May 2026
	47,559	–	–	–	**47,559**	25 August 2016	£4.9675	25 August 2019	25 August 2026
	–	255,267	–	–	**255,267**	16 May 2017	£3.702	16 May 2020[4]	16 May 2027
	193,897	**255,267**	**–**	**–**	**449,164**				
Alex Bevis[1, 2]	60,417	–	(60,417)	–	**–**	2 April 2012	£2.36	2 April 2015	2 April 2022
	18,798	–	–	(18,798)	**–**	2 April 2014	£8.96	2 April 2017	2 April 2024
	8,698[3]	–	–	(8,698)	**–**	12 May 2014	£7.52	12 May 2017	12 May 2024
	41,295	–	–	(10,323)	**30,972**	2 April 2015	£4.09	2 April 2018	2 April 2025
	34,667	–	–	(20,222)	**14,445**	1 April 2016	£4.875	1 April 2019	1 April 2026
	17,050[3]	–	–	(9,946)	**7,104**	11 May 2016	£4.93	11 May 2019	11 May 2026
	19,562	–	–	(11,411)	**8,151**	25 August 2016	£4.9675	25 August 2019	25 August 2026
	200,487	**–**	**(60,417)**	**(79,398)**	**60,672**				
Ted Wiggans	20,355	–	–	(20,355)	**–**	2 April 2014	£8.96	2 April 2017	2 April 2024
	8,800[3]	–	–	(8,800)	**–**	12 May 2014	£7.52	12 May 2017	12 May 2024
	44,716	–	–	–	**44,716**	2 April 2015	£4.09	2 April 2018	2 April 2025
	47,179	–	–	–	**47,179**	1 April 2016	£4.875	1 April 2019	1 April 2026
	–	93,193	–	–	**93,193**	16 May 2017	£3.702	16 May 2020[4]	16 May 2027
	121,050	**93,193**	**–**	**(29,155)**	**185,088**				
Lily Liu	–	93,193	–	–	**93,193**	16 May 2017	£3.702	16 May 2020[4]	16 May 2027
	–	31,979	–	–	**31,979**	16 May 2017	£3.7525	16 May 2020	16 May 2027
	–	**125,172**	**–**	**–**	**125,172**				

1 Number of shares as at 31 December 2017, or at date of leaving if earlier LTIPs granted as part of the bonus matching scheme.
2 Alex Bevis exercised post stepping down as Director. Lapsing occurred at the point of stepping down. Refer to payments to past Directors for more detail on page 65.
3 LTIPs granted as part of the bonus matching scheme.
4 A two year hold is in place with 33% being held for one year and 33% two years after vesting.

All employee share plans

The Executive Directors may participate in the Company's all employee share plans, the Xaar plc SAYE Scheme (SAYE Scheme) and the Xaar SIP, on the same basis as other employees.

The SAYE Scheme provides an opportunity to save a set monthly amount (up to £500) over three years towards the exercise of a discounted share option, which is granted at the start of the three years.

The SIP provides an opportunity for employees to buy shares from their pre-tax remuneration up to the limit permitted by the relevant tax legislation (currently £1,800 per year) and are awarded additional shares for free on a matching basis; the Company currently operates the plan on the basis of a 1:1 match but may award Matching Shares up to the maximum ratio permitted by the relevant tax legislation (currently a 2:1 ratio).

Options and awards under these plans are not subject to performance conditions.

The outstanding awards granted to each Executive Director under the SAYE Scheme are as follows:

Name	As at 1 January 2017	Granted during the year	Exercised during the year	**As at 31 December 2017**	Grant date	Exercise price	Earliest date of exercise	Expiry date
Doug Edwards	4,316	–	–	**4,316**	1 November 2015	£4.17	1 November 2018	1 May 2019
Lily Liu	–	5,232	–	**5,232**	1 November 2017	£3.44	1 November 2020	1 May 2021
Ted Wiggans	5,325	–	–	**5,325**	1 November 2014	£3.38	1 November 2017	1 May 2018

The outstanding awards granted to each Executive Director under the SIP are as follows:

Name	**Total number of matching shares as at 31 December 2017**
Doug Edwards	**854**
Ted Wiggans	**490**

Payments for loss of office made during the year

No payments for loss of office were made during the year.

Payments to past Directors

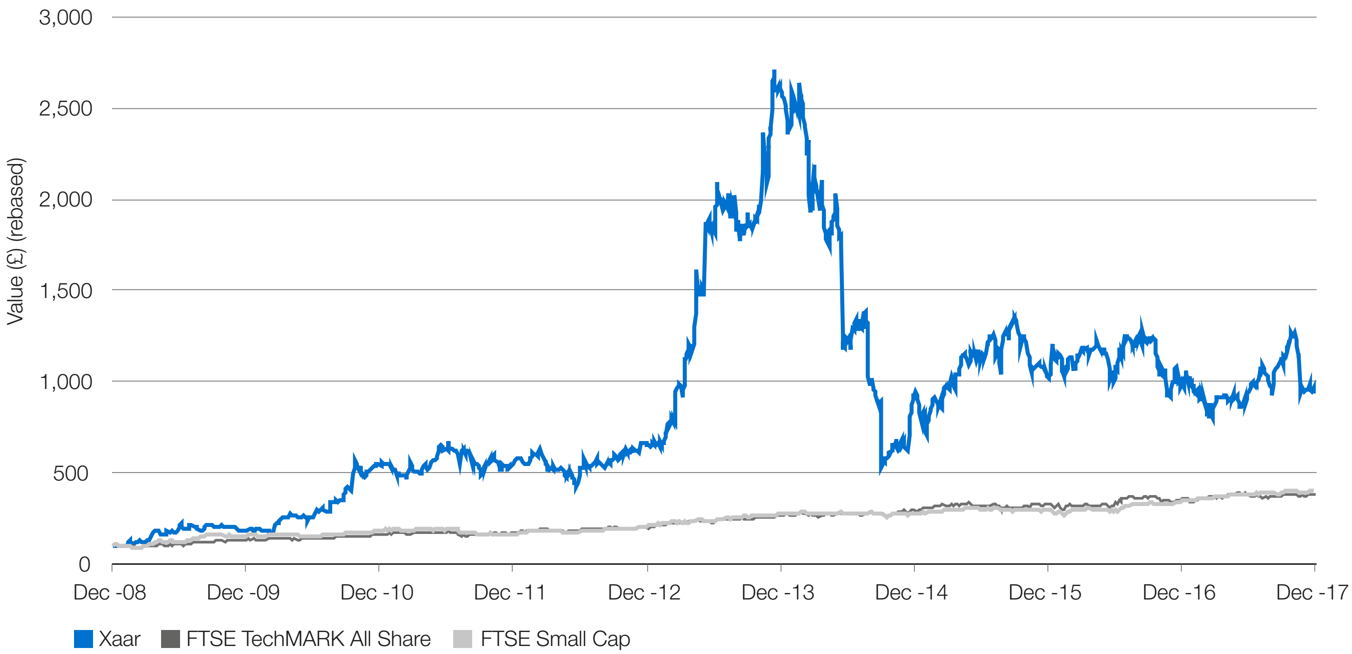
On 29 March 2017 Alex Bevis, CFO, left Xaar to pursue other opportunities. As stated in the 2016 Annual Report, the Remuneration Committee exercised their discretion to allow unvested LTIPs to be retained after a pro-rata adjustment. All other conditions including vesting date and performance conditions remained unchanged. The details of the vesting outcomes of his future vesting LTIP awards will be provided in the Annual Report for the appropriate year. No bonus was paid for 2017.

DIRECTORS' REMUNERATION REPORT CONTINUED

Performance graph and table

The graph on this page shows the Company's performance measured by total shareholder return (TSR), compared with the performance of the FTSE TechMARK All Share Index, which the Remuneration Committee considers to be the most appropriate index for comparison because they illustrate the Company's TSR performance against a broad equity market index of similar UK companies.

Total Shareholder Return



Source: Datastream (Thomson Reuters).

This graph shows the value, by 31 December 2017, of £100 invested in Xaar on 31 December 2008, compared with the value of £100 invested in the FTSE TechMARK All Share and FTSE Smallcap Indices on the same date on a yearly basis.

The other points plotted are the values at intervening financial year-ends.

The table below shows details of the total remuneration, annual bonus (as a percentage of maximum opportunity) and LTIP vesting percentage for the CEO over the last nine financial years.

	Total remuneration	Annual bonus as a % of maximum opportunity	LTIP as a % of maximum opportunity
Year ended 31 December 2017	579	0%	50%
Year ended 31 December 2016	429	12.5%	0%
Year ended 31 December 2015	571	48%	0%
Year ended 31 December 2014	562	0%	100%
Year ended 31 December 2013	1,379	83%	100%
Year ended 31 December 2012	649	53%	100%
Year ended 31 December 2011	1,244	100%	100%
Year ended 31 December 2010	504	80%	32%
Year ended 31 December 2009	229	0%	0%

CEO pay increase in relation to all employees

The table below sets out in relation to salary and annual bonus the increase between the pay for the year ended 31 December 2016 and the pay for the year ended 31 December 2017 for the CEO compared with the average increase/bonus award between the same periods for the wider workforce. For the purposes of the table below, the wider workforce has been defined as the UK employees of the Group. This comparator group was chosen because it is the most relevant sub-set of employees and can be used consistently.

Element of remuneration	CEO	Wider workforce average
Salary – % change	7.5%	3.5%
Annual bonus – absolute % of salary paid	0%	0%
Benefits – absolute % of salary paid	17%	9%

Spend on pay

The table below sets out the Group's distributions to shareholders by way of dividends and total Group-wide expenditure on pay for all employees (including employer social security, pension contributions and share-based payments), as reported in the audited financial statements for the financial year ended 31 December 2017.

	2017 £'000	2016 £'000	Change %
Dividends paid to shareholders	**7,728**	7,328	5%
Group-wide expenditure on pay for all employees (note 8)	**33,932**	31,055	9%

Implementation of Directors' Remuneration Policy for the financial year commencing 1 January 2018

Information on how the Company intends to implement the policy for the financial year commencing 1 January 2018 is set out below.

We want our remuneration policy to support the transformation of Xaar to lead the digital inkjet revolution and 2020 vision. A new three year policy was approved in 2017 to drive the delivery of the vision, to retain the key Executive talent required to deliver the transformation and to align Executive and shareholder interests.

DIRECTORS' REMUNERATION REPORT CONTINUED

Basic salary and fees

Our approach on base salary continues to be to provide a fixed remuneration component which reflects the increased experience and heightened complexity of the roles and the increasing business and geographic diversity.

The Remuneration Committee considers it to be appropriate to increase base salary for the CEO to £355,350 effective 1 July 2018. The salary of CFO Lily Liu will be increased to £236,900 effective 1 July 2018. There will be no change for the COO in 2018 as he is retiring in 2018.

The proposed base salary increases for the Executive Directors are shown below:

Year ended 31 December 2017	Increase effective from	2017	2018	% increase
Doug Edwards	1 July 2018	£345,000	£355,350	3%
Lily Liu	1 July 2018	£230,000	£236,900	3%
Ted Wiggans	–	£230,000	£230,000	0%

The proposed fee increases for the Non-Executive Directors are shown below:

Year ended 31 December 2017	Additional duties	Additional fees	Increase effective from	2017	2018	% increase
Robin Williams			1 July 2018	£102,000	£104,550	2.5%
Margaret Rice-Jones	Rem Com & SID	£4,000	1 July 2018	£44,300	£45,203	2.0%
Andrew Herbert	Audit Committee	£3,000	1 July 2018	£44,250	£45,203	2.2%
Chris Morgan			1 July 2018	£44,100	£45,203	2.5%

Annual bonus

No significant changes have been made to the total bonus structure, therefore, the maximum opportunity for the CEO is 125% and for the CFO and COO is 100% of salary. The core performance metrics of the bonus are profit and revenue growth. A cash component will be added for the CEO for 2018.

The Board considers the Group profit, revenue and cash targets for 2018 to be matters that are commercially sensitive and should therefore remain confidential to the Company. It provides our competitors with insight into our business plans, expectations and our strategic actions. However, the Remuneration Committee will disclose on a retrospective basis how the Company's performance relates to any annual bonus payments made.

Long term incentives

A new strategic goal will be added to reward the returns from the R&D investment in two pillars of our 2020 vision. Thin Film has seen significant investment over the last four years which has been capitalised. As amortisation commenced in 2017, it is now appropriate to set a target that relates to the revenue derived from this pillar along with that from Advanced Manufacturing. The performance target will be set as an absolute revenue target which will be measured in 2020. It will have an appropriate minimum threshold and straight-line vesting to a stretch maximum achievement.

The Board considers the exact details of this target to be a matter that is commercially sensitive and should therefore remain confidential to the Company. It provides our competitors with insight into our business plans, expectations and our strategic actions. However, the Remuneration Committee will disclose on a retrospective basis how the Company's performance relates to any vesting of this component.

Consideration by the Directors of matters relating to Directors' remuneration

Membership

The Company has established a Remuneration Committee which is constituted in accordance with the recommendations of the UK Corporate Governance Code. The terms of reference of the Remuneration Committee can be obtained by contacting the Company Secretary.

The Remuneration Committee is chaired by Margaret Rice-Jones. The other members during the year ended 31 December 2017 were Robin Williams, Andrew Herbert and Chris Morgan. All members of the Remuneration Committee are considered independent within the meaning of the UK Corporate Governance Code.

The principal function of the Remuneration Committee is to determine, on behalf of the Board, the specific remuneration and other benefits of Executive Directors, including pension contributions, bonus arrangements, long term incentives and service contracts. The fees paid to the Non-Executive Directors are determined by the Chief Executive Officer and the Chairman. The fees paid to the Chairman are determined by the Chief Executive Officer and the Non-Executive Directors.

Additionally, the Remuneration Committee makes recommendations to the Board on the framework of Executive Director remuneration as well as principal Company-wide compensation programmes.

The members of the Remuneration Committee have no personal financial interest, other than as shareholders, in the matters to be decided, no actual or potential conflicts of interest arising from other directorships and no day to day operational responsibility within the Company. Executive Directors are entitled to accept appointments outside the Group providing that the Chairman's permission is sought.

Advisors to the Remuneration Committee

The Remuneration Committee is assisted in its work by Xaar's human resources department including the Chief Human Resources Officer. The Chief Executive Officer is consulted on the remuneration of those who report directly to him and also of other senior Executives. No Executive Director or employee is present or takes part in discussions in respect of matters relating directly to their own remuneration.

During the year, the Remuneration Committee was not assisted in its work by any external consultants.

DIRECTORS' REMUNERATION REPORT CONTINUED

Shareholder voting

The Company remains committed to ongoing shareholder dialogue and takes an active interest in voting outcomes. The following table sets out actual voting in respect of the resolution to approve the Directors' Remuneration report for the year ended 31 December 2016.

Number of votes	For (including discretion)	Against	Withheld
Resolution 12 – Directors' Remuneration report for the year ended 31 December 2016	57,155,923 (88.0%)	7,801,350 (12.0%)	1,194
Resolution 13 – Directors' Remuneration policy for the year ended 31 December 2016	54,599,814 (86.2%)	8,720,060 (13.8%)	1,527,691
Resolution 17 – Approve the 2017 LTIP plan rules	54,658,242 (86.2%)	8,772,533 (13.8%)	1,527,692

Directors' Remuneration Policy

This part of the report sets out the Company's Directors' Remuneration Policy, which took binding effect from 16 May 2017. The Policy is determined by the Remuneration Committee.

The Directors' Remuneration Policy is not audited.

Policy table for Executive Directors

The table below describes each of the elements of the remuneration package for the Executive Directors. This is the proposed policy to run until May 2020.

Base salary	
Objective	Core element of fixed remuneration that provides the basis to recruit and retain talent necessary to deliver the business strategy.
Operation	Normally reviewed annually and any increases generally apply from 1 January or 1 July (but may be reviewed more frequently if required). When determining base salary levels, consideration is given to the following: • Role, responsibility and experience of the individual • Corporate and individual performance • Market conditions including typical pay levels for comparable roles in companies of a similar size and complexity • The range of salary increases awarded across the Group.
Opportunity	No maximum salary opportunity has been set out in this policy report to avoid setting expectations for Executive Directors and employees. The base salaries effective as at 1 July 2018, are shown on page 68. The Remuneration Committee resolved to move base salaries progressively to a level which is market competitive (in general, positioned below median) taking account of individual factors such as: • Increase in scope and responsibility • A new Executive Director being moved to market positioning over time • Alignment to market level.
Performance measure	Not applicable.

Benefits	
Objective	Provide a market-competitive benefits package to recruit and retain Directors of the calibre required for the business. Participation in the Company's Share Incentive Plan (SIP) and Share Save Scheme (SAYE) encourages share ownership and alignment with the wider workforce.
Operation	Executive Directors receive base benefits including car allowance, private medical insurance, and basic levels of other insurances (such as critical illness cover). All UK staff, including Executive Directors, are also provided with a benefit allowance which they can apply to a range of benefits, including pension contributions. In some circumstances, and subject to Remuneration Committee approval, the allowance may be paid in cash rather than utilised to purchase benefits. The SIP and SAYE are HMRC approved share plans for all employees facilitating the acquisition of shares in the Company at a discount. Other benefits may be provided based on individual circumstances, such as, but not limited to: housing or relocation allowances, travel allowance or other expatriate benefits.
Opportunity	Whilst the Remuneration Committee has not set an absolute maximum on the level of benefits Executive Directors receive, the value of benefits is set at a level which the Remuneration Committee considers to be appropriately positioned taking into account relevant market levels based on the nature and location of the role and individual circumstances. The flexible benefits allowance is currently up to 5% of base salary. The Remuneration Committee has the authority to review and amend this rate as appropriate. Individuals have the choice to invest all or part of this amount in their pension scheme, in addition to the benefits outlined in the 'Retirement benefits' section of this table. SAYE and SIP limits as permitted in accordance with the relevant tax legislation.
Performance measures	Not applicable.

Retirement benefits	
Objective	Provide market competitive post-employment benefits to recruit and retain Directors of the calibre required for the business.
Operation	Executive Directors are eligible to participate in the defined contribution pension scheme (or such other pension plan as may be deemed appropriate). In appropriate circumstances, Executive Directors may take a salary supplement instead of contributions into a pension plan.
Opportunity	10% of base salary for the Executive Directors. The Remuneration Committee has the authority to review and amend this rate as appropriate.
Performance measures	Not applicable.

DIRECTORS' REMUNERATION REPORT CONTINUED

Annual bonus	
Objective	Rewards performance against annual targets which support the strategic direction of the Company. The majority of staff participate in the same scheme.
Operation	Targets are set annually and any pay-out is determined by the Remuneration Committee after the period-end, based on performance against those targets. The Remuneration Committee has discretion to vary the bonus pay-out should any formulaic output not produce a fair result for either the Executive Director or the Company, taking account of the Remuneration Committee's assessment of overall business performance. The annual bonus is delivered in cash. Additionally Directors may opt to invest in the Company SIP (refer to note 32 for details).
Opportunity	Overall maximum annual bonus 125% of salary for CEO and 100% for CFO and COO. This will normally be subject to the following performance components: **Profit** The Company profit performance element represents 60% of the bonus and has a direct relationship with adjusted profit before tax, excluding any impact of IAS 38. A minimum profit threshold is set. **Revenue growth** The Company revenue performance element represents 40% of the bonus. This measure is based on revenue growth performance with a minimum profit threshold. The pay-out has the following parameters: • Below threshold performance: 0% of the maximum opportunity • On-target performance: 50% of the maximum opportunity • Maximum: 100% of the maximum opportunity. The Committee may vary the weighting of these measures and could consider alternative measures in future years.
Performance measures	Stretching performance targets are set each year reflecting the business priorities that underpin Group strategy. 125% (CEO) and 100% (CFO and COO) of salary can be earned based on achieving the maximum financial performance targets and subject to individual performance.

Long Term Incentive Plan	
Objective	Drive and reward the achievement of longer term objectives aligned closely to shareholders' interests. Retain key Executives over a longer term measurement period. Provide alignment with shareholders' interests. Support retention and promote share ownership.
Operation	Following the approval by shareholders in May 2017, the LTIP will operate as follows: An award of performance shares (zero priced share options) may be granted on an annual basis. The award is composed of two elements: • The base LTIP award is the primary element and will vest after three years subject to the achievement of the applied performance conditions • An outperformance multiplier will be applied to the base LTIP grant for the delivery of results relative to the FTSE small cap market. For upper quartile results, the base award will be multiplied by x1.167. For upper decile results, the CEO's base award will be multiplied by x2 (x1.5 for the CFO and COO). Vesting will occur at the end of a three year period. A two year hold is introduced with 33% being held for one year after vesting and 33% being held for two years after vesting. Vested LTIP options must be exercised within ten years of the date of grant. Under the rules of the LTIP, the Remuneration Committee has discretion to satisfy vested LTIP awards in cash. On the vesting/exercise of an LTIP award, the Remuneration Committee has the discretion to decide that Executives can receive an amount (in cash or shares) equal to the dividends paid or payable between the date of grant and the vesting of an award on the number of shares which have vested. Awards may vest early on a change of control (or other relevant event) subject to the satisfaction of the performance conditions (as determined by the Remuneration Committee) and pro-rating for the LTIP was previously approved by shareholders in April 2007. The Remuneration Committee may at its discretion structure awards as Approved Long Term Incentive Plan (ALTIP) awards. ALTIP awards enable the participant and Company to benefit from HMRC approved option tax treatment in respect of part of the award, without increasing the pre-tax value delivered to participants. ALTIP awards may be structured either as an approved option for the part of the award up to the HMRC limit (currently £30,000) with an unapproved option for the balance and a 'linked award' to fund the exercise price of the approved option, or as an approved option and an LTIP award, with the vesting of the LTIP award scaled back to take account of any gain made on the exercise of the approved option. Other than to enable the grant of ALTIP awards, the Company will not grant awards to Executive Directors under the Executive Share Option Plan.
Maximum opportunity	The maximum annual award of the base LTIP will be 150% of base salary for CEO and 100% of salary for CFO and COO. The outperformance multiplier could increase the maximum opportunity for the CEO to 300% of salary and to 150% for the CFO and COO. For the LTIP, for threshold performance, 25% of award will vest. Straight-line vesting applies between threshold and maximum vesting. These limits do not include the value of shares subject to any approved option granted as part of an LTIP award.
Performance measures	Stretching performance targets are set each year reflecting the business priorities that underpin longer term Group strategy. The base LTIP award will normally be measured using the following: • Three year cumulative EPS growth – 60% • Three year revenue growth – 40%. The Remuneration Committee retains the discretion to alter the weighting of measures and to apply alternative or additional measures in future years. The outperformance multiplier will be measured against relative TSR of the FTSE SmallCAP index.

DIRECTORS' REMUNERATION REPORT CONTINUED

Malus, clawback and underpin provisions

The Remuneration Committee has the right to:

- Reduce any LTIP awards which have not yet vested (i.e. a malus provision) if an act or omission contributes to a material misstatement of the Group's financial statements or results in material loss or reputational damage for the Company
- Recover cash or shares which have been paid or transferred (i.e. a clawback provision) if an act or omission contributes to a material misstatement of the Group's financial statements or results in material loss or reputational damage for the Company, for a period up to two years following determination of the vesting outcome
- Apply an underpin to LTIP vesting and bonus achievement and to flex the weighting of performance measure in the event of early vesting as a result of change of control.

Chairman and Non-Executive Directors

The table below sets out an overview of the remuneration of Non-Executive Directors.

Alignment with strategy/purpose	Approach of the Company
Chairman and Non-Executive Directors' fees Provide an appropriate reward to attract and retain Directors of the calibre required for the business.	The remuneration of the Chairman of the Board is set by the Remuneration Committee and the Chief Executive Officer. Fees are set at a level which reflects the skills, knowledge, and experience of the individual, whilst taking into account appropriate market data. The fee is set as a fixed annual fee and may be paid wholly or partly in cash or Company shares. The Chairman and the Chief Executive Officer are responsible for deciding Non-Executive Directors' fees. Fees are set taking into account several factors, including the size and complexity of the business, fees paid to Non-Executive Directors of UK listed companies of a similar size and complexity, and the expected time commitment and contribution for the role. The fees are set as a fixed annual fee and may be paid wholly or partly in cash or Company shares. Overall fees paid to Directors will remain within the limit stated of £300,000 in our Articles of Association. Non-Executive Directors do not participate in any incentive scheme. Directors may be eligible to benefits such as the use of secretarial support, travel costs or other benefits that may be appropriate.

Explanation of performance metrics chosen

The annual bonus is assessed against financial targets which are determined by the Remuneration Committee, typically Group adjusted profit before tax excluding any impact of IAS 38 and revenue growth. This incentivises Executive Directors to focus on delivering the key financial goals of the Company. These targets therefore ensure that the interests of the Executive Directors are aligned with those of the shareholders.

For the LTIP, long term performance measures are chosen by the Remuneration Committee to provide a robust and transparent basis on which to measure Xaar's performance over the longer term and to provide alignment with Xaar's business strategy. EPS, Revenue growth and TSR are deemed to be the key measure of success of the execution of our long term strategy.

The Remuneration Committee retains the discretion to adjust the performance targets and measures where it considers it appropriate to do so (for example, to reflect changes in the structure of the business and to assess performance on a fair and consistent basis from year to year), and has exercised its discretion in this area of leaver provisions as described under CFO transition in the 2016 Annual Report.

Awards may be adjusted in the event of a variation of capital in accordance with the scheme rules.

Pay policy for other employees

The Company values its wider workforce and aims to provide a remuneration package that is market competitive, complies with any statutory requirements, and is applied fairly and equitably across the wider employee population. Where remuneration is not determined by statutory regulation, the key principles of the compensation philosophy are as follows:

- We remunerate people in a manner that allows for stability of the business and the opportunity for sustainable long term growth
- We seek to remunerate fairly and consistently for each role with due regard to the marketplace, internal consistency and the Company's ability to pay
- The Company operates HMRC approved SIP and SAYE and invites all employees to participate, therefore encouraging wider workforce share ownership.

Illustrations of application of remuneration policy

The charts below set out an illustration of the remuneration policy, in line with the policy above and include base salary, pension, benefits and incentives. The charts provide an illustration of the proportion of total remuneration made up of each component of the policy and the value of each component.

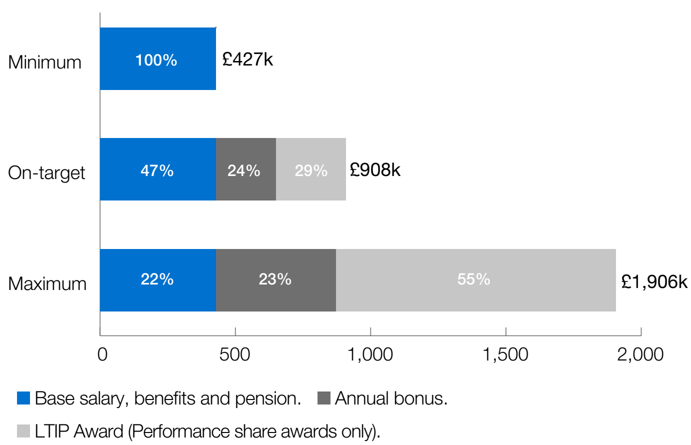
For these purposes base salary reflects the salary at 1 January 2018 and any anticipated increases in July 2018. Bonus is based on anticipated base salary as at 31 December 2018. Benefits are calculated as 12% of average salary for 2018. Pension is based on the policy set out in the policy table. LTIP awards are based on a base salary level pre 1 July 2018, and are calculated as set out in the policy on pages 60 to 63.

Three scenarios have been illustrated for each Executive Director.

Minimum performance	• No bonus pay-out • No vesting under the LTIP.
Performance at mid point	• 62.5% of salary pay-out under the annual bonus for the CEO, 50% for the CFO and COO • Shares equivalent to 75% of salary vesting under the LTIP for the CEO, 50% for the CFO and COO.
Maximum performance	• 125% of salary pay-out under the annual bonus for the CEO, 100% for the CFO and COO • Shares equivalent to 300% of salary vesting under the LTIP for the CEO, 150% for the CFO and COO.

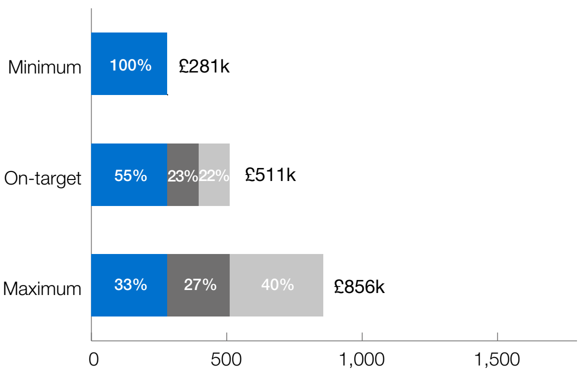
As required by the regulations, the scenarios do not include any share price growth assumptions or take into account any dividends that may be paid.

Chief Executive Officer – Doug Edwards, total remuneration £'000



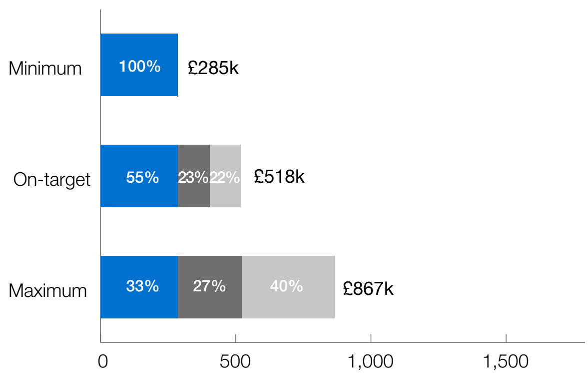
DIRECTORS' REMUNERATION REPORT CONTINUED

Chief Operations Officer Ted Wiggans, total remuneration £'000



■ Base salary, benefits and pension. ■ Annual bonus.
■ LTIP Award (Performance share awards only).

Chief Financial Officer Lily Liu, total remuneration £'000



■ Base salary, benefits and pension. ■ Annual bonus.
■ LTIP Award (Performance share awards only).

Approach to recruitment remuneration

When appointing a new Executive Director, whether with an internal or external candidate, the Remuneration Committee will typically seek to use the policy detailed in the table on pages 70 to 73 to determine the Executive Director's ongoing remuneration package.

To facilitate the appointment of candidates of the appropriate calibre required to implement the Group's strategy, the Remuneration Committee also retains the discretion to include any other remuneration component or award which is outside the policy. The Remuneration Committee does not intend to use this discretion to make a non-performance related incentive payment (for example, a 'golden hello'). In determining appropriate remuneration, the Remuneration Committee will take into consideration all relevant factors (including the quantum and nature of remuneration) to ensure that the arrangements are in the best interests of the Company and its shareholders. This may, for example, include (but is not limited to) the following circumstances:

- An interim appointment being made to fill an Executive Director role on a short term basis
- Exceptional circumstances require that the Chairman or a Non-Executive Director takes on an Executive function on a short term basis
- An Executive Director is recruited at a time in the year when it would be inappropriate to provide a bonus or long term incentive award for that year as there would not be sufficient time to assess performance. The quantum in respect of the months employed during the year may be transferred to the subsequent year so that reward is provided on a fair and appropriate basis
- The Executive received benefits at his previous employer which the Remuneration Committee considers it appropriate to offer.

The Remuneration Committee may also alter the performance measures, performance period and vesting period of the annual bonus or long term incentive, subject to the rules of the scheme, if the Remuneration Committee determines that the circumstances of the recruitment merit such alteration. The rationale will be clearly explained.

In determining appropriate remuneration arrangements on hiring a new Executive Director, the Remuneration Committee will take into account relevant factors such as the calibre of the individual, local market practice, the existing remuneration arrangements for other Executives and the business circumstances. It will seek to ensure that arrangements are in the best interests of both the Company and its shareholders and not seek to pay more than is appropriate.

The Remuneration Committee may make an award or payment to 'buy-out' remuneration arrangements forfeited on leaving a previous employer. In doing so the Remuneration Committee will take account of relevant factors regarding the forfeited arrangements which may include the form of any forfeited awards (e.g. cash or shares), any performance conditions attached to these awards (and the likelihood of meeting those conditions), and the time over which they would have vested. It will generally seek to structure buy-out awards and payments on a comparable basis to remuneration arrangements forfeited. These awards or payments are excluded from the maximum level of variable pay referred to below; however, the Remuneration Committee's intention is that the value awarded or paid would be no higher than the expected value of the forfeited arrangements.

Appropriate costs and support will be covered if the recruitment requires the relocation of the individual. All buy-out awards and payments will normally be liable to forfeiture or 'clawback' on early departure. For Executive Directors, early departure is typically defined as being within the first two years of employment although the Remuneration Committee has the ability to amend this definition in appropriate circumstances.

The maximum level of variable pay which may be awarded to new Executive Directors, excluding buy-out arrangements, would normally be in line with the maximum level of variable pay that may be awarded under the annual bonus plan and LTIP, but in any event the Remuneration Committee would not make an award of annual variable pay above 425% of salary. The Remuneration Committee may determine that such awards will be forfeited if performance or continued employment conditions are not met and it is deemed appropriate to do so.

Any share awards referred to in this section will be granted as far as possible under the Company's existing share plans. If necessary, and subject to the limits referred to above, in order to facilitate the awards mentioned above, the Committee may rely on exemption 9.4.2. of the Listing Rules which allows for the grant of awards to facilitate, in exceptional circumstances, the recruitment of a Director.

Where a position is fulfilled internally, any ongoing remuneration obligations or outstanding variable pay elements shall be allowed to continue according to the original terms.

Fees payable to a newly-appointed Chairman or Non-Executive Director will be in line with the fee policy in place at the time of appointment.

Service contracts

Executive Directors

It is the Group's policy that Executive Directors should have contracts with an indefinite term, providing for one year's notice.

	Date of contract[1]	Date of appointment	Notice from the Company	Notice from Director
Doug Edwards	5 January 2015	5 January 2015	12 months	12 months
Ted Wiggans[2]	4 December 2013	10 January 2011	12 months	12 months
Lily Liu	23 January 2017	2 May 2017	12 months	12 months

1 The dates of contract above refer to the dates of the latest service agreements for each of the Directors.
2 Ted Wiggans gave his notice of resignation on 9 August 2017.

Non-Executive Directors

All Non-Executive Directors are appointed for an initial three year term with provision for two further three year terms, subject to satisfactory performance.

	Date of letter of appointment[1]	Date of appointment	Unexpired term of contract on 31 December 2017
Robin Williams (Chairman)	27 September 2016	1 October 2016	21 months
Margaret Rice-Jones	3 June 2015	1 August 2015	7 months
Chris Morgan	2 December 2015	4 January 2016	12 months
Andrew Herbert	15 April 2016	1 June 2016	19 months

1 The dates above refer to the dates of the latest service agreements for each of the Non-Executive Directors.

All Directors offer themselves for annual re-election at each AGM in accordance with the UK Corporate Governance Code. Letters of appointment are available for inspection at the registered office address of the Company.

DIRECTORS' REMUNERATION REPORT CONTINUED

Payments for loss of office

The principles on which the determination of payments for loss of office will be approached is set out below. Where the Remuneration Committee retains discretion, as outlined below, it will be used to provide flexibility in certain situations, taking into account the particular circumstance of the Director's departure and recent performance of the Company.

Notice period on termination by employing company	12 months. The Committee has the discretion to determine what proportion of the notice period will be utilised in active service.
Termination payment	Severance payments are limited to no more than one year's salary plus benefits in kind (including company car or car allowance and private health insurance) and pension contributions (which may include salary supplements). Benefits provided in connection with termination of employment may also include, but are not limited to, outplacement and legal fees.

	Reason for cessation	Calculation of vesting/payment	Timing of vesting
Annual Bonus	Termination with cause.	No bonus paid.	Not applicable.
	Resignation or retirement.	No bonus is normally paid unless the Committee in its absolute discretion (and on a case-by-case basis) determines otherwise.	Normal payment date.
	Redundancy, disability, illness, injury, death or any other reason as determined by the Remuneration Committee.	Typically bonus amounts will be determined by reference to the applicable performance targets, pro-rated for time served in relation to the performance period.	Normal payment date unless Remuneration Committee decides it should be earlier.
LTIP	Termination with cause.	Lapse.	Not applicable.
	Resignation or Retirement.	Normally lapse but with Remuneration Committee discretion to determine otherwise.	Normal vesting date.
	Redundancy, disability, illness, injury, death or any other reason as determined by the Remuneration Committee.	Pro rated to proportion of period worked during vesting period. Remuneration Committee can decide not to pro rate.	Normal vesting unless Remuneration Committee decides it should be at cessation of employment.
	Death.	Discretion to disapply performance conditions.	Date of cessation – unless Remuneration Committee decides normal vesting date.
SIP and SAYE	Governed by the HMRC approved plan rules and which cover certain leaver provisions.		

Non-Executive Directors

Under the terms of their engagement, the notice period to be given by the Non-Executive Directors on the Company is six months and the Company is obliged to give the same length of notice. Discretion is retained to terminate with or without due notice or paying any payment in lieu of notice dependent on what is considered to be in the best interests of the Company in the particular circumstances.

Statement of consideration of employment conditions elsewhere in the Company

Salary, benefits and performance related reward provided to employees is taken into account when setting policy for Executive Directors' remuneration (although employees are not formally consulted in relation to the setting of the policy). This includes consideration of:

- Salary increases for the general employee population
- Company-wide benefit (including pension) offerings
- Overall spend and participation levels in the annual bonus and LTIP
- Relevant ad-hoc information.

Existing contractual arrangements

The Remuneration Committee reserves the right to make any remuneration payments and payments for loss of office notwithstanding that they are not in line with the policy set out below where the terms of the payment were agreed:

(i) before the policy came into effect, or
(ii) at a time when the relevant individual was not a Director of the Company and, in the opinion of the Remuneration Committee, the payment was not in consideration for the individual becoming a Director of the Company.

For these purposes 'payments' includes the Remuneration Committee satisfying awards of variable remuneration and, in relation to an award over shares, the terms of the payment are 'agreed' at the time the award is granted.

The Remuneration Committee may make minor changes to this policy, which do not have a material advantage to Directors, to aid in its operation or implementation without seeking shareholder approval but taking into account the interests of shareholders.

Statement of consideration of shareholder views

In the interests of ensuring ongoing and transparent dialogue with shareholders, the Remuneration Committee consulted major shareholders over its base salaries and proposed new three year policy outlined in this report.

Approval

This Report was approved by the Board on 21 March 2018 and signed on its behalf by:

Margaret Rice-Jones
Remuneration Committee Chair

DIRECTORS' RESPONSIBILITIES STATEMENT

The Directors are responsible for preparing the Annual Report and the financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors are required to prepare the Group financial statements in accordance with International Financial Reporting Standards ('IFRSs') as adopted by the European Union and Article 4 of the IAS Regulation and have also chosen to prepare the parent Company financial statements in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework. Under Company law the Directors must not approve the accounts unless they are satisfied that they give a true and fair view of the state of affairs of the Company and of the profit or loss of the Company for that period.

In preparing the parent Company financial statements, the Directors are required to:

- Select suitable accounting policies and then apply them consistently
- Make judgments and accounting estimates that are reasonable and prudent
- State whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

In preparing the Group financial statements, International Accounting Standard 1 requires that Directors:

- Properly select and apply accounting policies
- Present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information
- Provide additional disclosures when compliance with the specific requirements in IFRSs are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance
- Make an assessment of the Company's ability to continue as a going concern.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Responsibility statement

We confirm that to the best of our knowledge:

- The financial statements, prepared in accordance with the relevant financial reporting framework, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole
- The Strategic Report includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face
- The Annual Report and financial statements, taken as a whole, are fair, balanced and understandable and provide the information necessary for shareholders to assess the Company's performance, business model and strategy.

This responsibility statement was approved by the Board of Directors and is signed on its behalf by:

Doug Edwards
Chief Executive Officer

Lily Liu
Chief Financial Officer and Company Secretary

21 March 2018

Independent auditor's report to the members of Xaar plc

Report on the audit of the financial statements

Opinion

In our opinion:

- the financial statements give a true and fair view of the state of the Group's and of the parent Company's affairs as at 31 December 2017 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union;
- the parent Company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice including Financial Reporting Standard 101 "Reduced Disclosure Framework"; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

We have audited the financial statements of Xaar plc (the 'Company') and its subsidiaries (the 'Group') which comprise:

- the Consolidated income statement;
- the Consolidated statement of comprehensive income;
- the Consolidated statement of financial position;
- the Consolidated statement of changes in equity;
- the Consolidated cash flow statement;
- the related Consolidated notes 1 to 34;
- the Company balance sheet;
- the Company statement of changes in equity; and
- the related Company notes 1 to 10.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and IFRSs as adopted by the European Union. The financial reporting framework that has been applied in the preparation of the Company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework" (United Kingdom Generally Accepted Accounting Practice).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report.

We are independent of the Group and the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We confirm that, with one exception, no non-audit services prohibited by the FRC's Ethical Standard were provided to the Group or Company. The one exception was that services relating to the preparation of tax forms and support regarding tax inspections were provided to an insignificant overseas affiliate of the Company. The impact of the tax charge of this insignificant affiliate on the Group's tax accounting was immaterial and inconsequential, as was the fee (£6,000), however, in the light of the FRC's view that no services with a direct impact can be provided, this is a breach, albeit insignificant, of the standard. It was concluded in agreement with the Audit Committee that given the size of the services provided and their potential impact, as well as the safeguards in place, the provision of these services did not impact upon our integrity, objectivity and independence as auditor to the Group or the Company.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Summary of our audit approach

Key audit matters	The key audit matters that we identified in the current year were: • Customer rebates • Royalty buyout revenue recognition • Capitalisation of internally generated intangible assets • Valuation of new product inventory Within this report, any new key audit matters are identified with ⌃ and any key audit matters which are the same as the prior year identified with ›.
Materiality	The materiality that we used in the current year was £0.9 million which was determined based on a blended measure using a combination of profit and asset benchmarks.
Scoping	The scope of our audit was driven by our risk assessment and understanding of the business. This consisted of five components subjected to full scope audits, one component subjected to specific audit procedures and six components subjected to analytical procedures at Group level.
Significant changes in our approach	In the current year we identified two new key audit matters, valuation of new inventory products and royalty buyout revenue recognition, in response to the number of new products launched during the year and a material agreement entered into in December 2017. There have been no other significant changes in our approach in the current year.

Conclusions relating to principal risks, going concern and viability statement

Going concern	We have reviewed the Directors' statement in note 3 to the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them and their identification of any material uncertainties to the Group's and Company's ability to continue to do so over a period of at least 12 months from the date of approval of the financial statements. We are required to state whether we have anything material to add or draw attention to in relation to that statement required by Listing Rule 9.8.6R(3) and report if the statement is materially inconsistent with our knowledge obtained in the audit.	**We confirm that we have nothing material to report, add or draw attention to in respect of these matters.**

Principal risks and viability statement	Based solely on reading the Directors' statements and considering whether they were consistent with the knowledge we obtained in the course of the audit, including the knowledge obtained in the evaluation of the Directors' assessment of the Group's and the Company's ability to continue as a going concern, we are required to state whether we have anything material to add or draw attention to in relation to: • the disclosures on pages 29 to 33 that describe the principal risks and explain how they are being managed or mitigated; • the Directors' confirmation on page 48 that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity; or • the Directors' explanation on page 48 as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions. We are also required to report whether the Directors' statement relating to the prospects of the Group required by Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.	**We confirm that we have nothing material to report, add or draw attention to in respect of these matters.**

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

In 2016 our report included acquisition fair value accounting as a key audit matter due to the material acquisition made by the Group in that year. This key audit matter is not included in our 2017 report as the Group has not made an acquisition in the current year.

Customer rebates	Our response and observation
Key audit matter description	The Group has volume price agreements with a number of its significant customers. We consider there to be a key audit matter with respect to the accounting for commercial sales agreements with Xaar's significant customers. This is due to the degree of judgement and estimation involved in predicting sales volumes which drives the accounting for commercial sales agreements and the associated revenue in line with IAS 18 and the Group's accounting policy. Given the degree of judgement and estimation involved, we also determined that there was a potential for fraud through possible manipulation of this balance. The accounting policy is disclosed in note 3 to the financial statements. Note 2 to the financial statements provides details of the critical accounting judgements and page 54 provides the Audit Committee's discussion on revenue recognition.
How the scope of our audit responded to the key audit matter	When auditing customer rebates we considered the Group's revenue recognition policy, per International Accounting Standard 18 'Revenue' (IAS 18), to assess whether the revenue recognition policy is compliant and whether the policy has been applied consistently through the year. We performed testing over all significant commercial sales agreements that Xaar has with its major customers by reviewing the terms and conditions of sales, assessing the accounting treatment and reconciling to amounts recognised in the financial statements; also assessing compliance with IAS 18. We performed a retrospective review of prior period accounting estimates in relation to commercial sales agreements to assess the accuracy of management estimates.

Independent auditor's report to the members of Xaar plc continued

Customer rebates continued	Our response and observation
Key observations	Based on the audit procedures performed, we concur that no customer rebate provisions should be recognised. We also concluded that the associated revenue was recognised in line with the Group's accounting policy and IAS 18.

Royal buyout revenue recognition	Our response and observation
Key audit matter description	The Group entered into a patent royalty buyout agreement with a customer in December 2017 for JPY 2.98 billion (circa £20 million). We consider there to be a key audit matter with respect to the accounting for this agreement. This is due to the degree of judgement and estimation involved in fair valuing the patents acquired and determining the timing of revenue recognition in accordance with IAS 18. In accordance with IAS 240 we have considered the presumed fraud risk in revenue recognition in relation to this transaction. The accounting policy is disclosed in note 3 of the financial statements. Note 2 to the financial statements provides details of the critical accounting judgements and page 54 provides the Audit Committee's discussion on revenue recognition.
How the scope of our audit responded to the key audit matter	When auditing the agreement we considered the Group's revenue recognition policy, per International Accounting Standard 18 'Revenue' (IAS 18), to assess whether the revenue had been recognised in accordance with the standard. We evaluated and challenged the assumptions used by management in the fair value model used for allocating consideration to each element. We did this by considering alternative judgements and assumptions that could have been made and through obtaining evidence to support them including analysts' report on Xaar, industry market research and historical royalty trends. In conjunction with our valuation specialists we estimated an appropriate discount rate with reference to market data and compared that to the rate used by management.
Key observations	Based on the audit procedures performed, we concur with the revenue recognised in 2017 in respect of this agreement. We also concluded that the associated revenue was recognised in line with IAS 18.

Capitalisation of internally generated intangible assets	Our response and observation
Key audit matter description	The Group incurred £18.1 million on research and development costs in the year ended 31 December 2017, excluding amortisation on internally generated research and development, (2016: £22.4 million), representing a decrease of 19% from 2016. Xaar management has concluded that there are two development projects meeting the capitalisation criteria in IAS 38 "Intangible Assets" (IAS 38) in the current year. In 2016, there was one project meeting the capitalisation criteria known as the 'P4 platform' in relation to which £5.6 million of development costs have been capitalised during the year (2016: £10.2 million). In the current year management identified a new project meeting the IAS 38 capitalisation criteria known as 'Project Venice', capitalisation commenced from April 2017 and during the year £0.9 million development costs have been capitalised (2016: £nil). Because of the judgements applied in determining whether a product is technically feasible and commercially viable and the complexity of the criteria applied, we consider there to be a key audit matter in relation to development costs being incorrectly accounted for (i.e. capitalised or expensed through the income statement). There is also a key audit matter in relation to the recoverability of capitalised development costs from likely future economic benefits. The accounting policy is disclosed in note 3 to the financial statements. The carrying values of the capitalised development costs are disclosed in note 14 to the financial statements. Note 2 to the financial statements provides details of the critical accounting judgements and page 54 provides the Audit Committee's discussion on capitalisation of internally generated intangible assets.

Capitalisation of internally generated intangible assets continued

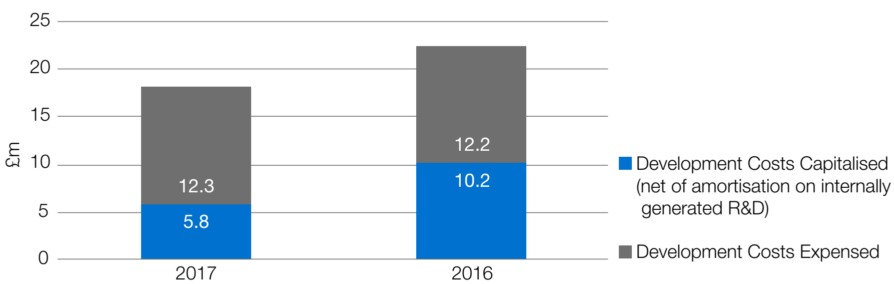
Our response and observation

How the scope of our audit responded to the key audit matter

We audited management's accounting treatment of development costs by testing a sample of research and development project costs to assess whether they are accurate and appropriately classified. We discussed the P4 platform, Project Venice and other research and development (R&D) with R&D and operational management, in order for us to assess whether the P4 platform continues to meet and Project Venice met the development criteria during the year and therefore requires capitalisation. We challenged management on the point of capitalisation of Project Venice. We obtained supporting evidence, as described below, to ensure technical feasibility and commercial viability had been demonstrated in April 2017, the point of capitalisation. We also considered whether any other projects have reached the development phase and therefore require capitalisation.

For the two capitalised projects we made an assessment of the technical feasibility and likelihood of future economic benefit by reference to product test stage classifications, management's project appraisals, agreements entered into with partners and feedback from partners. In August 2017 the P4 platform stopped being capitalised as the product design was finalised and the first commercial sales of the product began in November 2017, we ensured the point at which P4 costs stopped being capitalised was in line with IAS 38. We also challenged management regarding the useful economic life of the platform of 20 years, the period the product is being amortised over. In making this assessment we have considered the useful economic life (UEL) of previously capitalised technology, competitor benchmarks and capabilities and market reach of the new platform.

Research and development costs capitalised versus expensed



We obtained revenue and contribution forecast for the capitalised development project and closely examined management estimates included in the forecast with references to industry statistics and historic performance of the Group's other products. Net present value of the forecast contribution was also compared to the carrying value of the capitalised development costs.

Key observations

Based on the audit procedures performed, we concur that management has appropriately applied the principles of IAS 38.

Valuation of new product inventory

Our response and observation

Key audit matter description

Xaar has launched seven new products in the past 24 months.

We consider there to be a key audit matter in respect of the valuation of new product inventories. This is due to the degree of judgement and estimation involved in the assumptions used by management such as absorption rates and those costs being absorbed/not being absorbed in order to identify a new product's operating standard cost in line with IAS 2 and the Group's accounting policy when normal production levels might not be well established.

The accounting policy is disclosed in note 3 to the financial statements.

Note 2 to the financial statements provides details of the critical accounting judgements and page 54 provides the Audit Committee's discussion on inventory valuation.

Independent auditor's report to the members of Xaar plc continued

Valuation of new product inventory continued	Our response and observation
How the scope of our audit responded to the key audit matter	We assessed management's inventory valuation method by auditing the assumptions used in the derivation of the absorption rates, such as the normal level of production outputs, the costs that are required to be absorbed into inventory to ensure the methodology used is in line with the requirements of IAS 2. We performed testing over the assumptions used by management in the derivation of the absorption rates for a sample of new product lines. This included auditing inputs such as the type of costs being absorbed, normal level of production outputs and re-calculating the direct labour cost absorption per unit and the overhead absorption rate used for each new inventory line. We sampled post year-end sale values to ensure new inventory lines held at the year-end were held at the lower of cost and net realisable value (NRV). Where products NRV was less than the NRV we ensured management provided against the products.
Key observations	Based on the audit procedures performed, we concur that management has appropriately applied the principles of IAS 2 in respect of valuing the new inventory lines.

Our application of materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group financial statements	Company financial statements
Materiality	£0.9 million (2016: £1.3 million)	£0.7 million (2016: £1.0 million)
Basis for determining materiality	We considered both asset and profit bases in the determination of materiality.	We determined materiality based on 0.5% (2016: 0.7%) of net assets and 5.6% (2016: 5.7%) of profit before tax.
Rationale for the benchmark applied	In addition to a profit-based metric, we incorporated a net asset measure in determining materiality to reflect the significant levels of capitalised research and development costs incurred in recent years. Materiality equates to below 0.6% (2016: 2%) of net assets and 7.5% (2016: 7.3%) of pre-tax profit.	Net assets is considered the most appropriate benchmark as it is the key performance metric for users of the financial statements for Xaar plc company only. Materiality has been capped at £0.7 million for the purpose of the Group audit.

We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of £0.05 million (2016: £0.06 million), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

An overview of the scope of our audit

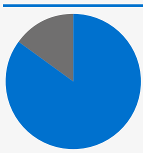
Our Group audit was scoped by obtaining an understanding of the Group and its environment, including Group-wide controls, and assessing the risks of material misstatement at the Group level.

Based on that assessment, we focused our Group audit scope primarily on the audit work at the UK headquarters in Cambridge. Five (2016: two) components were subject to a full scope audit by the Group audit team: Xaar plc, XaarJet Limited, Xaar Technology Limited, XaarJet (Overseas) Limited and Xaar Digital Limited. One (2016: three) components (Engineered Printing Solutions Inc.) was subject to specified audit procedures where the extent of our testing was based on our assessment of the risks of material misstatement and of the materiality of the Group's operations at those components. Six (2016: six) components (Xaar Trustee Limited, Xaar Americas Inc., Xaar Group AB, XaarJet AB, Xaar US Holdings Inc. and Xaar ApS) were subject to a review at the Group level based on our assessment of the materiality of the Group's operations at those components. The same components were subject to full scope audit or specified audit procedures in 2016. All components where our Group audit was focused were audited by the Group team.

The six components subject either to a full audit or specified balance testing account for 85% (2016: 93%) of the Group's revenue, 93% (2016: 93%) of the Group's profit before tax and 96% (2016: 96%) of the Group's net assets. Our audit work for each component was executed at levels of materiality applicable to each individual component which were lower than Group materiality. The component materiality ranges between £0.2 million to £0.8 million (2016: £0.7 million to £1.1 million).

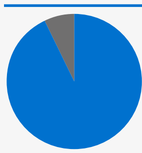
At the parent entity level we also tested the consolidation process and carried out analytical procedures to confirm our conclusion that there were no significant risks of material misstatement of the aggregated financial information of the remaining components not subject to audit or audit of specified account balances.

Revenue



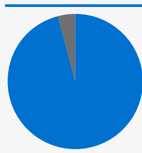
Full scope audit and specified balance testing	85%
Review at Group Level	15%

Profit before tax



Full scope audit and specified balance testing	93%
Review at Group Level	7%

Net assets



Full scope audit and specified balance testing	96%
Review at Group Level	4%

Other information	
The Directors are responsible for the other information. The other information comprises the information included in the Annual Report, other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon. In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. In this context, matters that we are specifically required to report to you as uncorrected material misstatements of the other information include where we conclude that: • Fair, balanced and understandable – the statement given by the Directors that they consider the Annual Report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's performance, business model and strategy, is materially inconsistent with our knowledge obtained in the audit; or • Audit Committee reporting – the section describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee; or • Directors' statement of compliance with the UK Corporate Governance Code – the parts of the Directors' statement required under the Listing Rules relating to the Company's compliance with the UK Corporate Governance Code containing provisions specified for review by the auditor in accordance with Listing Rule 9.8.10R(2) do not properly disclose a departure from a relevant provision of the UK Corporate Governance Code.	**We have nothing to report in respect of these matters.**

Responsibilities of Directors

As explained more fully in the Directors' responsibilities statement, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the Directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Directors are responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or the Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Use of our report

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Report on other legal and regulatory requirements

Opinions on other matters prescribed by the Companies Act 2006

In our opinion the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Strategic Report and the Directors' Report have been prepared in accordance with applicable legal requirements.

In the light of the knowledge and understanding of the Group and of the Company and their environment obtained in the course of the audit, we have not identified any material misstatements in the Strategic Report or the Directors' Report.

Matters on which we are required to report by exception

Adequacy of explanations received and accounting records

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the Company, or returns adequate for our audit have not been received from branches not visited by us; or
- the Company financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

Directors' remuneration

Under the Companies Act 2006 we are also required to report if in our opinion certain disclosures of Directors' remuneration have not been made or the part of the Directors' Remuneration Report to be audited is not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

Other matters

Auditor tenure

Following the recommendation of the Audit Committee, we were appointed by the Board of Directors of Xaar plc on 24 July 2009 to audit the financial statements for the year ending 31 December 2009 and subsequent financial periods. The period of total uninterrupted engagement including previous renewals and reappointments of the firm is nine years, covering the years ending 2009 to 2017.

Consistency of the audit report with the additional report to the Audit Committee

Our audit opinion is consistent with the additional report to the Audit Committee we are required to provide in accordance with ISAs (UK).

Paul Schofield FCA (Senior statutory auditor)
For and on behalf of Deloitte LLP
Statutory Auditor
Cambridge, United Kingdom

21 March 2018

Consolidated income statement
for the year ended 31 December 2017

	Notes	2017 £'000	2016 £'000
Revenue	5	**100,142**	96,178
Cost of sales		**(53,097)**	(51,511)
Gross profit		**47,045**	44,667
Research and development expenses		**(12,318)**	(12,211)
Research and development expenditure credit		**411**	605
Sales and marketing expenses		**(7,860)**	(7,608)
General and administrative expenses		**(12,627)**	(6,844)
Restructuring and acquisition expenses		**(2,553)**	(1,205)
Operating profit		**12,098**	17,404
Investment income	9	**192**	449
Profit before tax		**12,290**	17,853
Tax	10	**(1,358)**	(3,052)
Profit for the year attributable to shareholders	7	**10,932**	14,801
Earnings per share			
Basic	12	**14.3p**	19.4p
Diluted	12	**14.0p**	18.9p

Dividends paid in the year amounted to £7,728,000 (2016: £7,328,000). Further disclosures are given in note 11.

All activities relate to continuing operations.

Consolidated statement of comprehensive income
for the year ended 31 December 2017

	Notes	2017 £'000	2016 £'000
Profit for the year attributable to shareholders		**10,932**	14,801
Items that may be reclassified subsequently to profit or loss:			
Exchange differences on retranslation of net investment	28/29	**(721)**	708
Tax (charge)/credit on share option and restructuring gains	10	**(20)**	434
Other comprehensive (loss)/income for the year		**(741)**	1,142
Total comprehensive income for the year		**10,191**	15,943

Consolidated statement of financial position as at 31 December 2017

	Notes	2017 £'000	2016 £'000
Non-current assets			
Goodwill	13	**5,212**	5,776
Other intangible assets	14	**32,678**	27,363
Property, plant and equipment	15	**33,471**	36,352
Receivables	19	**858**	1,516
		72,219	71,007
Current assets			
Investments	17	**–**	1,000
Inventories	18	**19,119**	13,790
Trade and other receivables	19	**30,303**	20,340
Current tax asset	19	**3,412**	3,029
Treasury deposits	19	**753**	–
Cash and cash equivalents	19	**43,944**	49,321
		97,531	87,480
Total assets		**169,750**	158,487
Current liabilities			
Trade and other payables	22	**(16,583)**	(14,314)
Other financial liabilities	23	**(30)**	(69)
Provisions	24	**(1,911)**	(774)
		(18,524)	(15,157)
Net current assets		**79,007**	72,323
Non-current liabilities			
Deferred tax liabilities	21	**(3,905)**	(2,686)
Other financial liabilities	23	**(137)**	(188)
Total non-current liabilities		**(4,042)**	(2,874)
Total liabilities		**(22,566)**	(18,031)
Net assets		**147,184**	140,456
Equity			
Share capital	25	**7,833**	7,778
Share premium	26	**29,317**	27,854
Own shares	27	**(3,642)**	(3,642)
Other reserves	29	**14,638**	11,891
Translation reserve	28	**613**	807
Retained earnings	29	**98,425**	95,768
Equity attributable to shareholders		**147,184**	140,456
Total equity		**147,184**	140,456

The financial statements of Xaar plc, registered number 3320972, were approved by the Board of Directors and authorised for issue on 21 March 2018.

They were signed on its behalf by:

D. Edwards

Doug Edwards
Chief Executive Officer

Lily Liu
Chief Financial Officer and Company Secretary

Consolidated statement of changes in equity for the year ended 31 December 2017

	Notes	Share capital £'000	Share premium £'000	Own shares £'000	Other reserves £'000	Translation reserve £'000	Retained earnings £'000	Total £'000
Balance at 1 January 2016		7,764	27,585	(3,796)	11,006	99	87,880	130,538
Profit for the year		–	–	–	–	–	14,801	14,801
Tax on items taken directly to equity		–	–	–	–	–	434	434
Exchange differences on retranslation of net investment		–	–	–	–	708	–	708
Total comprehensive income for the period		–	–	–	–	708	15,235	15,943
Issue of share capital		14	269	–	–	–	(2)	281
Dividends	11	–	–	–	–	–	(7,328)	(7,328)
Credit to equity for equity-settled share-based payments		–	–	154	885	–	(17)	1,022
Balance at 1 January 2017		**7,778**	**27,854**	**(3,642)**	**11,891**	**807**	**95,768**	**140,456**
Profit for the year		**–**	**–**	**–**	**–**	**–**	**10,932**	**10,932**
Tax on items taken directly to equity		**–**	**–**	**–**	**–**	**–**	**(20)**	**(20)**
Exchange differences on retranslation of net investment		**–**	**–**	**–**	**–**	**(194)**	**(527)**	**(721)**
Total comprehensive income for the period		**–**	**–**	**–**	**–**	**(194)**	**10,385**	**10,191**
Issue of share capital		**55**	**1,463**	**–**	**–**	**–**	**–**	**1,518**
Dividends	11	**–**	**–**	**–**	**–**	**–**	**(7,728)**	**(7,728)**
Credit to equity for equity-settled share-based payments		**–**	**–**	**–**	**2,747**	**–**	**–**	**2,747**
Balance at 31 December 2017		**7,833**	**29,317**	**(3,642)**	**14,638**	**613**	**98,425**	**147,184**

The nature and purpose of the reserves in equity are described in note 29.

Consolidated cash flow statement
for the year ended 31 December 2017

	Notes	2017 £'000	2016 £'000
Net cash from operating activities	30	**12,473**	13,935
Investing activities			
Investment income		**190**	471
Acquisition of subsidiary, net of cash acquired		**–**	(7,556)
Redemption of investment		**1,000**	–
Purchases of property, plant and equipment		**(5,517)**	(10,831)
Proceeds on disposal of property, plant and equipment		**–**	16
Expenditure on software		**(19)**	(85)
Expenditure on capitalised product development		**(6,451)**	(10,222)
Net cash used in investing activities		**(10,797)**	(28,207)
Financing activities			
Dividends paid		**(7,728)**	(7,328)
Treasury amounts (deposited)/withdrawn		**(753)**	27,098
Proceeds from the sale of ordinary share capital		**–**	137
Proceeds from issue of ordinary share capital		**1,518**	282
Net cash (used in)/from financing activities		**(6,963)**	20,189
Net (decrease)/increase in cash and cash equivalents		**(5,287)**	5,917
Effect of foreign exchange rate changes on cash balances		**(90)**	755
Cash and cash equivalents at beginning of year		**49,321**	42,649
Cash and cash equivalents at end of year		**43,944**	49,321

Cash and cash equivalents (which are presented as a single class of asset on the face of the consolidated statement of financial position) comprise cash at bank and other short term highly liquid investments with a maturity of three months or less. The carrying amount of these assets is approximately equal to their fair value.

Notes to the consolidated financial statements for the year ended 31 December 2017

1. General information

Xaar plc ('the Group') is incorporated in England and Wales under the Companies Act 2006. The address of the registered office is given on the inside back cover. The nature of the Group's operations and its principal activity is set out in the Strategic Report starting on page 4.

2. Key sources of estimation uncertainty and critical accounting judgements

The key assumptions concerning the future and other sources of estimation uncertainty at the date of the statement of financial position that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are as follows:

Revenue recognition of the Seiko Instruments Inc. agreement (accounting judgement)

As per International Accounting Standard 18 revenue is recognised at the fair value of the consideration received or receivable. The Seiko Instruments Inc. (SII) agreement includes two separate licences one of which was provided to SII in December 2017 and the other to be provided to SII in 2018. Given the separate nature of these two licences and the timing of their provision, these have been unbundled and revenue recognised based on the fair value of their expected cash flows.

Impairment of goodwill (accounting judgement)

The Group determines whether goodwill is impaired at least on an annual basis. This requires an estimation of the 'value-in-use' of the cash-generating units to which the goodwill is allocated. Estimating a value-in-use amount requires management to make an estimate of the expected future cash flows from the cash-generating unit and also to choose a suitable discount rate in order to calculate the present value of those cash flows. Further details are given in note 13. The carrying amount of goodwill at 31 December 2017 was £5,212,000 (2016: £5,776,000).

Capitalisation of development costs (accounting judgement)

As described in note 3, the Group capitalises development expenditure as an intangible assets where the criteria under IAS 38 Intangible Assets is met. In 2017, total capitalised development expenditure amounted to £6,451,000 (2016: £10,223,000).

Useful economic life of capitalised Platform 4 Thin Film development costs (accounting judgement)

In August 2017, the Group completed the Platform 4 Thin Film project and commenced amortisation of the related capitalised development expenditure balance amounting to £31,514,000. The design of the Thin Film platform provides the Group with an architecture that can be used to create a generation of products that will access multiple markets. This technology platform will not only address markets which have already converted to digital inkjet printing but will also drive adoption in other markets. Given the size of the current, and potential, addressable market; current conversion rates of these markets; and the barriers to entry for potential competitors in terms of intellectual property and expense, the Group believes it has a technology platform that will provide significant value over the next 20 years. This expectation mirrors management's experience with the Group's original bulk technology which has experienced a 20-year useful economic life. Therefore management, based on past experience and future expectations, has determined that the useful economic life of the Platform 4 asset should be set at 20 years. The amount amortised in 2017 was £657,000 and the annual amortisation charge in future financial years will be £1,576,000.

3. Significant accounting policies

Basis of accounting

The financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS), as adopted for use in the European Union. Therefore the Group financial statements have been prepared in accordance with Article 4 of the EU IAS regulation.

The financial information has been prepared on the basis of all applicable IFRS, including all International Accounting Standards (IAS), Standing Interpretations Committee (SIC) interpretations and International Financial Reporting Interpretations Committee (IFRIC) interpretations issued by the International Accounting Standards Board (IASB) that are applicable to the financial period, as adopted by the European Union.

The financial statements have been prepared on the historical cost basis, except for the revaluation of financial instruments. The Group financial statements are presented in Sterling and all values are rounded to the nearest thousand pounds (£'000) except when otherwise indicated.

The principal accounting policies adopted are set out below.

Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company ('its subsidiaries') made up to 31 December each year. Control is achieved where the Company has the power to govern the financial and operating policies of an investee entity so as to obtain benefits from its activities.

The results of subsidiaries acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition or up to the effective date of disposal, as appropriate. Where necessary, adjustments are made to the financial statements of subsidiaries to bring the accounting policies used in line with those used by the Group.

All intra-group transactions, balances, income and expenses are eliminated on consolidation. Foreign exchange gains and losses arising on the retranslation of trading balances with subsidiaries with different functional currencies are reported in the income statement.

3. Significant accounting policies continued

Going concern

The Group's business activities, together with the factors likely to affect its future development, performance and position, are set out in the Strategic Report. Notes 19, 20 and 23 include a description of the Group's objectives; policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments and hedging activities; and its exposure to credit risk and liquidity risk.

After making enquiries, the Directors have a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future, based on the Group's forecasts and projections for the next 12 months, taking account of reasonably possible changes in trading performance. For this reason, we continue to adopt the going concern basis in preparing the financial statements.

Adjusted financial measures

Adjusted financial measures comprise adjusted profit before tax, adjusted profit before tax excluding the impact of IAS 38 and adjusted diluted earnings per share. These measures are alternative performance measures (APMs) which are not defined or specified under the requirements of IFRS. These APMs adjust for recurring and non-recurring items which management consider to have a distorting effect on the underlying results of the Group. Items adjusted include share-based payment charges, exchange differences on intra-group transactions, restructuring and acquisition costs and the research and development expenditure credit. Recurring items are adjusted each year irrespective of materiality to ensure consistent treatment.

Business combinations

The acquisition of subsidiaries is accounted for using the acquisition method.

Goodwill arising on acquisition is recognised as an asset and initially measured at cost, being the excess of the cost of the business combination over the Group's interest in the net fair value of the identifiable assets, liabilities and contingent liabilities recognised. If, after reassessment, the Group's interest in the net fair value of the acquiree's identifiable assets, liabilities and contingent liabilities exceeds the cost of the business combination, the excess is recognised immediately in the income statement.

Goodwill

Goodwill arising on consolidation is initially recognised as an asset at cost and is subsequently measured at cost less any accumulated impairment losses. Goodwill which is recognised as an asset is reviewed for impairment at least annually. Any impairment is recognised immediately in the income statement and is not subsequently reversed.

For the purposes of impairment testing, goodwill is allocated to each of the Group's cash-generating units expected to benefit from the synergies of the combination. Cash-generating units to which goodwill has been allocated are tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than the carrying amount of the unit, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata on the basis of the carrying amount of each asset in the unit. An impairment loss recognised for goodwill is not reversed in a subsequent period.

On disposal of the cash-generating unit, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

Goodwill arising on acquisitions before the date of transition to IFRS has been retained at the previous UK GAAP amounts subject to being tested for impairment at that date. Goodwill written off to reserves under UK GAAP prior to 1998 has not been reinstated and is not included in determining any subsequent profit or loss on disposal.

Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable and represents amounts receivable for goods and services provided in the normal course of business, net of discounts, VAT and other sales related taxes, but gross of any tax withheld.

Sales of goods are recognised when all of the following conditions are satisfied:

- The Group has transferred to the buyer the significant risks and rewards of ownership of the goods
- The Group retains neither a continuing managerial involvement to the degree normally associated with ownership, nor effective control over goods sold
- The amount of revenue can be measured reliably
- It is probable that the economic benefits associated with the transaction will flow to the entity
- The costs incurred, or to be incurred, in respect of the transaction can be measured reliably.

For sales of goods to a distributor with consignment stock arrangements, revenue is recognised at the point of sale by the distributor which is when the risks and rewards of ownership of inventory have transferred. For sales of goods to distributors with standard credit terms, revenue is recognised at point of shipment.

Notes to the consolidated financial statements continued for the year ended 31 December 2017

3. Significant accounting policies continued

Revenue recognition continued

Development fees gained from joint development agreements are treated as income over the periods necessary to match them with the related costs.

Funding received for internally generated intangible assets is recognised on a straight-line basis to match the amortisation period of the related intangible fixed asset.

Royalties are recognised on an accruals basis in accordance with the actual revenue trend in the most recent quarterly statements received from each licensee.

Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount.

Printheads are sold to certain customers with volume discounts. Revenue from these sales is recorded based on the contracted price less the estimated volume discount based on the anticipated volume of sales.

Leases

Rentals payable under operating leases are charged to income on a straight-line basis over the term of the relevant lease, except where another more systematic basis is more representative of the time pattern in which the economic benefits from the lease asset are consumed. Contingent rentals arising under operating leases are recognised as an expense in the period in which they are incurred.

In the event that lease incentives are received to enter into operating leases, such incentives are recognised as a liability. The aggregate benefit of incentives is recognised as a reduction of rental expense on a straight-line basis, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

Foreign currencies

The individual financial statements of each Group company are presented in the currency of the primary economic environment in which it operates (its functional currency). For the purpose of the consolidated financial statements, the results and financial position of each Group company are expressed in Sterling, which is the functional currency of the Company and the presentation currency for the consolidated financial statements.

Exchange differences arising on the settlement of monetary assets and liabilities, and on the retranslation of monetary assets and liabilities, are included in the income statement for the period.

In order to hedge its exposure to certain foreign exchange risks, the Group may enter into forward contracts (see page 99 for details of the Group's accounting policies in respect of such derivative financial instruments).

For the purposes of presenting consolidated financial statements, the assets and liabilities of the Group's foreign operations are translated at the exchange rates prevailing on the date of the statement of financial position. Income and expense items are translated at the average exchange rates for the period.

Exchange differences arising are recognised in other comprehensive income and taken to the translation reserve. Exchange differences on the translation of net investments are taken to the translation reserve of the applicable entity.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate.

Government and EU grants

Government and EU grants are not recognised until there is reasonable assurance that the Group will comply with the conditions attached to them and that the grant will be received.

Government and EU grants relating to research and development are treated as income over the periods necessary to match them with the related costs.

Operating profit

Operating profit is stated after charging restructuring costs but before investment income and finance costs.

Retirement benefit costs

Payments to defined contribution retirement benefit schemes are charged as an expense as they fall due. Payments made to state managed retirement benefit schemes are dealt with as payments to defined contribution schemes where the Group's obligations under the schemes are equivalent to those arising in a defined contribution retirement benefit scheme.

Taxation

The tax expense represents the sum of the tax currently payable and deferred tax, including UK corporation tax and foreign tax.

3. Significant accounting policies continued

Taxation continued

The tax currently payable is based on taxable profit for the year. Taxable profit differs from net profit as reported in the income statement because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by date of the statement of financial position.

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit and is accounted for using the statement of financial position liability method. Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Such assets and liabilities are not recognised if the temporary difference arises from the initial recognition of goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the tax profit nor the accounting profit.

Deferred tax liabilities are recognised for taxable temporary differences arising on investments in subsidiaries, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the date of each statement of financial position and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised. Deferred tax is charged or credited in the income statement, except when it relates to items charged or credited directly to equity, in which case the deferred tax is also dealt with in equity.

To the extent that the Group receives a tax deduction relating to share-based payment transactions, deferred tax is provided at the appropriate tax rate on the difference in value between the market price of the underlying equity as at the date of the financial statements and the exercise price of the outstanding share options. As a result, the deferred tax impact of share options will not be derived directly from the expense reported in the consolidated income statement. The amount by which the deductible difference exceeds the cumulative charge to the consolidated income statement is recorded in the consolidated statement of comprehensive income.

Deferred tax assets and liabilities are measured on an undiscounted basis and are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

Property, plant and equipment

All property, plant and equipment is shown at original historical cost less accumulated depreciation and any recognised impairment loss.

Assets in the course of construction for production or administrative purposes are carried at cost, less any recognised impairment loss. Depreciation of these assets, on the same basis as other assets in the same class, commences when the assets are ready for their intended use.

Depreciation is charged so as to write off the cost or valuation of assets, less their residual values, other than assets in the course of construction, over their estimated useful lives, using the straight-line method, on the following bases:

Leasehold property improvements	Ten years or, where shorter, over the term of the relevant lease
Plant and machinery	Three to ten years
Furniture, fittings and equipment	Three to five years

Assets held under finance leases are depreciated over their expected useful lives on the same basis as owned assets or, where shorter, over the term of the relevant lease.

The gain or loss arising on the disposal of an asset is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in income.

Internally generated intangible assets – research and development expenditure

Expenditure on research activities is recognised as an expense in the period in which it is incurred.

In accordance with IAS 38 Intangible Assets where a project has entered the development phase and is sufficiently self-contained that the expected future economic benefits can be traced directly to the assets developed within the project, it is probable that the expected future economic benefits that are attributable to the asset will flow to the entity, and the cost of the asset can be measured reliably, the development costs related to the project will be capitalised as an intangible asset.

Internally generated intangible assets are amortised on a straight-line basis over their useful lives. Where no internally generated intangible asset can be recognised, development expenditure is recognised as an expense in the period in which it is incurred.

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

3. Significant accounting policies continued

Other intangible assets

Costs incurred in maintaining the patent and trademark portfolio are written off to the income statement as incurred.

Payments in respect of software, external product development costs and licence rights acquired are capitalised at cost and amortised on a straight-line basis over their estimated useful lives.

Impairment of tangible and intangible assets excluding goodwill

At the date of each statement of financial position, the Group reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where the asset does not generate cash flows that are independent from other assets, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of fair value less costs to sell and value-in-use. In assessing value-in-use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised as an expense immediately.

Where an impairment loss is subsequently reversed, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognised as income immediately.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is calculated using the first in, first out (FIFO) cost formula, by applying the standard cost methodology, with costs including direct materials, direct labour costs and an attributable proportion of manufacturing overheads based on normal levels of activity that have been incurred in bringing the inventories to their present location and condition. Net realisable value represents the estimated selling price less all estimated costs of completion and costs to be incurred in marketing, selling and distribution. Provision is made for obsolete, slow-moving or defective items where applicable.

Financial instruments

Financial assets and financial liabilities are recognised in the Group's statement of financial position when the Group becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition.

Financial assets

All financial assets are recognised and derecognised on a trade date where the purchase or sale of a financial asset is under a contract whose terms require delivery of the financial asset with the timeframe established by the market concerned, and are initially measured at fair value, plus transaction costs.

All financial assets of the Group are classified as 'loans and receivables'.

Loans and receivables

Trade receivables, loans and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as 'loans and receivables'. Loans and receivables are measured at amortised cost using the effective interest method, less any impairment. Interest income is recognised by applying the effective interest rate, except for short term receivables when the recognition of interest would be immaterial.

Effective interest method

The effective interest method is a method of calculating the amortised cost of a debt instrument and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts through the life of the debt instrument, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Impairment of financial assets

Financial assets are assessed for indicators of impairment at the date of each statement of financial position. Financial assets are impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected.

For financial assets carried at amortised cost, the amount of the impairment is the differences between the asset's carrying amount and the present value of the estimated future cash flows, discounted at the financial asset's original effective interest rate.

3. Significant accounting policies continued

Financial instruments continued

Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognised in other comprehensive income and accumulated in equity is recognised in profit or loss.

Financial liabilities and equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement.

Financial liabilities

The financial liabilities of the Group are classified as other financial liabilities. Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs.

Other financial liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective yield basis.

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Derecognition of financial liabilities

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit and loss.

Derivative financial instruments and hedge accounting

The Group's activities expose it primarily to the financial risks of changes in foreign currency exchange rates and interest rates and liquidity risk.

The Group uses derivative financial instruments (primarily foreign currency forward contracts) to hedge its risks associated with foreign currency fluctuations relating to certain firm commitments and forecast transactions.

The Group's interest rate risk arises mainly from its funds invested in short term bank deposits. To mitigate these risks, limits have been set by the Board in relation to maturity period and maximum deposits with any one institution.

In order to mitigate the Group's liquidity risks, the Group can choose to fund significant fixed asset purchases by finance leases repayable over a period of three to five years dependent on the individual asset being financed and interest-bearing loans.

The use of financial derivatives is governed by the Group's policies approved by the Board of Directors, which provides written principles on the use of financial derivatives consistent with the Group's risk management strategy. The Group does not use derivative financial instruments for speculative purposes.

Derivative financial instruments are initially measured at fair value on the contract date and are remeasured to fair value at subsequent reporting dates.

Changes in the fair value of derivative financial instruments that are designated as hedges of future cash flows and deemed to be effective are recognised directly in equity and the ineffective portion is recognised immediately in the income statement. If the cash flow hedge of a firm commitment or forecast transaction results in the recognition of an asset or a liability, then, at the time the asset or liability is recognised, the associated gains or losses on the derivative that had previously been recognised in equity are included in the initial measurement of the asset or liability. For hedges that do not result in the recognition of an asset or a liability, amounts deferred in equity are recognised in the income statement in the same period in which the hedged item affects net profit or loss. However, when the forecast transaction that is hedged results in the recognition of a non-financial asset or non-financial liability, the gains and losses previously accumulated in equity are transferred from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability.

Changes in fair value of derivative financial instruments that do not qualify for hedge accounting are recognised in the income statement as they arise.

3. Significant accounting policies continued

Derivative financial instruments and hedge accounting continued

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated, exercised, or no longer qualifies for hedge accounting. At that time, any cumulative gain or loss on the hedging instrument recognised in equity is retained in equity until the forecast transaction occurs. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss recognised in equity is transferred to net profit or loss for the period.

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of host contracts and the host contracts are not carried at fair value, with gains or losses reported in the income statement.

Investments

Investments are recognised and derecognised on a trade date where a purchase or sale of an investment is under a contract whose terms require delivery of the investment within the time frame established by the market concerned and are initially measured at fair value, equating to cost, including transaction costs. Investments are classified as available for sale, and on the basis that the investments have no active market and their fair values cannot be reliably determined using valuation techniques, the investments are carried at cost.

If there is objective evidence that an impairment loss on an unquoted equity investment that is not carried at fair value because its fair value cannot be reliably measured, 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 discounted at the current market rate of return for a similar financial asset.

Bonds with fixed or determinable payments and fixed maturity dates that the Group has the positive intent and ability to hold to maturity are classified as held-to-maturity investments. Held-to-maturity investments are measured at amortised cost using effective interest method less any impairment.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and demand deposits and other short term highly liquid investments that are readily convertible to a known amount of cash within a period of up to three months post the date of the statement of financial position and are subject to an insignificant risk of changes in value.

Treasury deposits

Treasury deposits comprise demand deposits that are convertible to a known amount of cash with an original maturity of between three months and 12 months and are subject to an insignificant risk of changes in value.

Interest-bearing loans and borrowings

Interest-bearing loans and bank overdrafts are measured initially at fair value, net of direct issue costs. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on an accrual basis in the income statement using the effective interest rate method and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Equity instruments

Equity instruments issued by the Company are recorded as the proceeds received, net of direct issue costs.

Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event and it is probable that the Group will be required to settle that obligation. Provisions are measured at the Directors' best estimate of the expenditure required to settle the obligation at the date of the statement of financial position and are discounted where the effect of the time value of money is material.

A restructuring provision is recognised when the Group has developed a detailed formal plan for the restructuring and has raised a valid expectation in those affected that it will carry out the restructuring by starting to implement the plan or announcing its main features to those affected by it, and the plan has reached a stage where the decision is unlikely to be reversed. The measurement of a restructuring provision includes only the direct expenditures arising from the restructuring, which are those amounts that are both necessarily entailed by the restructuring and not associated with the ongoing activities of the entity.

Provisions for the expected cost of warranty obligations under local sale of goods legislation are recognised in the month of sale of the relevant products, at the Directors' best estimate of the expenditure required to settle the Group's obligation.

Share-based payments

The Group has applied the requirements of IFRS 2 Share-based Payment. In accordance with the transitional provisions, IFRS 2 has been applied to all grants of equity instruments after 7 November 2002 that were unvested at 1 January 2005.

The Group issues equity-settled share-based payments to certain employees. These payments are measured at fair value (excluding the effect of non-market based vesting conditions) at the date of grant. The fair value determined at the grant date of the equity-settled share-based payments is expensed on a straight-line basis over the vesting period, based on the Group's estimate of the shares that will eventually vest and adjusted for the effect of non-market based vesting conditions.

3. Significant accounting policies continued

Share-based payments continued

The fair value of options issued under the Group's Long Term Incentive Plan is measured using a stochastic (Monte Carlo binomial) model for grants made with market based vesting conditions since 2007. The fair value of all other equity-settled share-based payments is measured using the Black-Scholes pricing model. The expected life used in these models has been adjusted, based on management's best estimate, for the effects of non-transferability, exercise restrictions and behavioural considerations.

SAYE share options granted to employees are treated as cancelled when employees cease to contribute to the scheme. This results in accelerated recognition of the expenses that would have arisen over the remainder of the original vesting period.

Own shares

Own shares are deducted from equity. No gain or loss is recognised in the income statement on the purchase, sale, issue or cancellation of the Group's own shares.

New standards and interpretations

A number of new standards are effective for annual periods beginning on or after 1 January 2018. The following standards are expected to have an impact on the Group's financial statements in the period of initial application.

IFRS 15 Revenue from Contracts with Customers

IFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognised. It replaces existing revenue recognition guidance, IAS 18 Revenue.

The standard is effective for annual periods beginning on or after 1 January 2018.

Sales of custom-built printing machines

The Group's US subsidiary EPS sells custom-built printing machines to industrial customers. Currently, revenue is recognised when the printer is accepted by the customer, which transfers the risks and rewards of ownership. Revenue is recognised at this point provided that the revenue and costs can be measured reliably and the recovery of the consideration is probable.

Depending on the specific contract terms, revenue may potentially need to be recognised over time for some of the EPS contracts, when one of the conditions in IFRS 15, paragraph 35 is met.

Other revenue streams

For all other revenue streams, IFRS 15 is not expected to have a significant impact on revenue recognition.

Transition

The Group plans to adopt IFRS 15 using the modified retrospective approach, with the cumulative effect of initially applying this standard recognised at the date of initial application (i.e. 1 January 2018). As a result, the Group will not apply the requirements of IFRS 15 to the comparative period presented.

IFRS 16 Leases

IFRS 16 replaces existing leases guidance, including 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.

The standard is effective for annual periods beginning on or after 1 January 2019.

IFRS 16 introduces a single, on-statement of financial position lease accounting model for lessees. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are recognition exemptions for short term leases and leases of low-value items.

The Group has completed an initial assessment of the potential impact on its consolidated financial statements but has not yet completed its detailed assessment. The actual impact of applying IFRS 16 on the financial statements in the period of initial application will depend on future economic conditions, including the Group's Weighted Average Cost of Capital, the composition of the Group's lease portfolio at that date, the Group's latest assessment of whether it will exercise any lease renewal options and the extent to which the Group chooses to use practical expedients and recognition exemptions.

So far, the most significant impact identified is that the Group will recognise new assets and liabilities for its operating leases of factory, research and office facilities. As at 31 December 2017, the Group's future minimum lease payments under non-cancellable operating leases amounted to £4,634,000, on an undiscounted basis (see note 31).

Notes to the consolidated financial statements continued for the year ended 31 December 2017

3. Significant accounting policies continued

IFRS 16 Leases continued

In addition, the nature of expenses related to those leases will now change as IFRS 16 replaces the straight-line operating lease expense with a depreciation charge for right-of-use assets and interest expense on lease liabilities.

The Group does not currently have any finance leases, but were it to take out any in the future, they would not be expected to be significantly impacted by IFRS 16.

Transition

As a lessee, the Group can elect to apply the standard using a retrospective approach, or a modified retrospective approach with optional practical expedients. The lessee applies this election consistently to all of its leases.

The Group plans to apply IFRS 16 initially on 1 January 2019, using the modified retrospective approach. Therefore, the cumulative effect of adopting IFRS 16 will be recognised as an adjustment to the opening balance of retained earnings at 1 January 2019, with no restatement of comparative information.

When applying the modified retrospective approach to leases previously classified as operating leases under IAS 17, the lessee can elect, on a lease-by-lease basis, whether to apply a number of practical expedients on transition. The Group is assessing the potential impact of using these practical expedients.

Other standards

The following new standards, amended standards and interpretations are not expected to have a significant impact on the Group's financial statements:

IFRS 9	Financial Instruments
IFRS 2 (amendments)	Classification and Measurement of Share-based Payment Transactions
IFRIC Interpretation 22	Foreign Currency Transactions and Advance Consideration
IFRIC Interpretation 23	Uncertainty over Income Tax Treatments
Annual Improvements to IFRSs (amendments)	

4. Reconciliation of adjusted financial measures

	2017 £'000	2016 £'000
Profit before tax	**12,290**	17,853
Share-based payment charges	**3,057**	969
Exchange differences on intra-group transactions	**523**	60
Restructuring and acquisition costs	**2,553**	1,205
Research and development expenditure credit	**(411)**	(605)
Adjusted profit before tax	**18,012**	19,482
Capitalised research and development expense and related amortisation	**(5,795)**	(10,222)
Adjusted profit before tax excluding the impact of IAS 38	**12,217**	9,260

Adjusted financial measures are alternative performance measures, which adjust for recurring and non-recurring items that management consider to have a distorting effect on the underlying results of the Group.

Share-based payment charges include the IFRS 2 charge for the period of £2,747,000 per note 32 (2016: £885,000) and the charge relating to National Insurance on the outstanding potential share options of £310,000 (2016: £84,000). These costs were included in the general and administrative expenses in the Consolidated income statement.

4. Reconciliation of adjusted financial measures continued

Exchange differences relating to intra-group transactions represent exchange gains or losses recorded in the Consolidated income statement as a result of operating in the United States and Sweden. These costs were included in the general and administrative expenses in the Consolidated income statement.

Restructuring and acquisition expenses of £2,553,000 (2016: £1,205,000) relate to costs incurred and a provision made in relation to a reorganisation (note 24) and earn-out expenses relating to the acquisition of EPS in 2016.

The research and development expenditure credit relates to the corporation tax relief receivable relating to qualifying research and development expenditure. This item is shown on the face of the Income statement.

Adjusted profit before tax excluding the impact of IAS 38 Capitalisation of Development Costs and net of Thin Film amortisation is the measure that is used internally for setting and comparing achievement of the annual bonus target.

	2017 Pence per share	2016 Pence per share
Diluted earnings per share	**14.0p**	18.9p
Share-based payment charges	**3.9p**	1.2p
Exchange differences on intra-group transactions	**0.7p**	0.2p
Restructuring and acquisition expenses	**3.3p**	1.5p
Tax effect of adjusting items	**(1.2p)**	(0.6p)
Adjusted diluted earnings per share	**20.7p**	21.2p

5. Revenue

An analysis of the Group's revenue is as follows:

	Notes	**2017 £'000**	2016 £'000
Product sales, commissions and fees		**83,758**	82,863
Royalties		**16,384**	13,315
		100,142	96,178
Investment income	9	**192**	449
		100,334	96,627

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

6. Business and geographical segments

Products and services from which reportable segments derive their revenues.

For management reporting purposes, the Group's operations are currently analysed according to the two operating segments of 'product sales, commissions and fees' and 'royalties'. These two operating segments are the basis on which the Group reports its primary segment information and on which decisions are made by the Group's Chief Executive Officer and Board of Directors, and resources allocated. The Group's chief operating decision maker is the Chief Executive Officer.

Segment information is presented below:

Year ended 31 December 2017	Product sales, commissions and fees £'000	Royalties £'000	Unallocated £'000	Consolidated £'000
Revenue				
Total segment revenue	**83,758**	**16,384**	**–**	**100,142**
Result				
Adjusted profit before tax	**1,978**	**15,842**	**192**	**18,012**
Share-based payment charges	**–**	**–**	**(3,057)**	**(3,057)**
Exchange differences relating to intra-group transactions	**(523)**	**–**	**–**	**(523)**
Restructuring and acquisition expenses	**(2,553)**	**–**	**–**	**(2,553)**
Research and development expenditure credit	**411**	**–**	**–**	**411**
(Loss)/profit before tax	**(687)**	**15,842**	**(2,865)**	**12,290**

Investment income is not allocated to reportable segments for the purposes of reporting to the Group's Chief Executive Officer and Board of Directors.

Share-based payment charges include the IFRS 2 charge for the period and the charge relating to National Insurance on the outstanding potential share option gains.

Year ended 31 December 2016	Product sales, commissions and fees £'000	Royalties £'000	Unallocated £'000	Consolidated £'000
Revenue				
Total segment revenue	82,863	13,315	–	96,178
Result				
Adjusted profit before tax	5,718	13,315	449	19,482
Share-based payment charges	–	–	(969)	(969)
Exchange differences relating to intra-group transactions	(60)	–	–	(60)
Restructuring costs	(1,205)	–	–	(1,205)
Research and development expenditure credit	605	–	–	605
Profit/(loss) before tax	5,058	13,315	(520)	17,853

6. Business and geographical segments continued

Segment assets

	2017 £'000	2016 £'000
Product sales, commissions and fees	**123,800**	106,604
Royalties	**1,253**	1,562
Total segment assets	**125,053**	108,166
Investments	**–**	1,000
Treasury deposits	**753**	–
Cash and cash equivalents	**43,944**	49,321
Total assets	**169,750**	158,487

Assets are allocated to the segment which has responsibility for their control.

No information is provided for segment liabilities as this measure is not provided to the chief operating decision maker.

Other segment information

Year ended 31 December 2017	Notes	Product sales, commissions and fees £'000	Royalties £'000	Unallocated £'000	Consolidated £'000
Depreciation and amortisation	14, 15	**8,944**	**–**	**–**	**8,945**
Share-based payment charges				**3,057**	**3,057**
Capital expenditure	14, 15	**11,947**	**–**	**–**	**11,947**

Year ended 31 December 2016	Notes	Product sales, commissions and fees £'000	Royalties £'000	Unallocated £'000	Consolidated £'000
Depreciation and amortisation	14, 15	8,638	–	–	8,638
Share-based payment charges		–	–	969	969
Capital expenditure	14, 15	23,149	–	–	23,149

Revenues from major products and services

	2017 £'000	2016 £'000
Product sales, commissions and fees	**83,758**	82,863
Royalties	**16,384**	13,315
Consolidated revenue (excluding investment income)	**100,142**	96,178

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

6. Business and geographical segments continued

Geographical information

The Group operates in three principal geographical areas: EMEA, Asia and the Americas. Revenues are attributed to geographical areas on the basis of the customers' operating location. The Group's revenue from external customers and information about its segments (non-current assets excluding deferred tax assets and other financial assets) by geographical location is detailed below:

	Revenue from external customers	
	2017 £'000	2016 £'000
EMEA	**29,784**	41,653
Asia		
– China	**32,139**	20,928
– Japan	**18,214**	14,091
– Other	**594**	1,385
The Americas (including USA)	**19,411**	18,121
	100,142	96,178

Non-current assets, being property, plant and equipment, goodwill, other intangible assets, investments, receivables and the deferred tax asset, are attributed to the location where they are situated.

	Non-current assets	
	2017 £'000	2016 £'000
EMEA	**69,932**	68,257
Asia	**15**	27
The Americas (including USA)	**2,836**	2,723
	72,783	71,007

Information about major customers

Included in revenues arising from royalties, is one customer whose revenue exceeds 10% of total revenues, with revenue of £14.7 million (15% of total revenues) (2016: no customer exceeded 10% of total revenues). No other single customer contributed 10% or more to the Group's revenue in either 2017 or 2016. Revenue from the top five customers represents 42% of revenues (2016: 40%).

7. Profit for the year

Profit for the year has been arrived at after charging/(crediting):

	2017 £'000	2016 £'000
Research and development expenses (net of capitalised development costs)*	**12,318**	12,211
Grants towards research and development including the research and development expenditure credit	**(489)**	(605)
Depreciation of property, plant and equipment	**7,795**	7,851
Amortisation of capitalised development costs (included in research and development expenses)	**1,149**	492
Amortisation of software (included in general and administrative expenses)	**25**	295
Loss/(profit) on disposal of property, plant and equipment	**351**	(3)
Cost of inventories recognised as expense	**53,097**	51,511
Impairment of other financial assets (note 19)	**30**	138
Total fees payable to the Company's auditor and its associates	**173**	180

* Total spend on research and development in 2017, before capitalised and amortised development costs included in note 14, was £18,113,000 (2016: £22,433,000).

Grant income includes £411,000 in respect of the research and development expenditure credit and £78,000 from the N2 Business Growth Fund in support of the Xaar 3D Centre.

7. Profit for the year continued

Auditor's remuneration

	2017 £'000	2016 £'000
Fees payable to the Company's auditor for the audit of the Company's annual accounts	**22**	22
Fees payable to the Company's auditor and its associates for other services to the Group		
– The audit of the Company's subsidiaries	**119**	104
Total audit fees	**141**	126
– Interim review	**26**	25
– Taxation compliance services	**6**	9
– Recruitment and remuneration services	**–**	12
– Other services	**–**	8
Total non-audit fees	**32**	54
Total fees payable to the Company's auditor and its associates	**173**	180

The Audit Committee has considered the independence of the auditor in relation to non-audit services throughout the year. A description of the work of the Audit Committee is set out in the Corporate Governance statement on pages 54 to 55.

8. Staff costs

The average monthly number of persons employed by the Group including Executive Directors was as follows:

	2017 Number	2016 Number
Research and development	**113**	127
Sales and marketing	**54**	55
Manufacturing and engineering	**364**	368
Business support	**72**	76
	603	626

Their aggregate remuneration comprised:

	Notes	2017 £'000	2016 £'000
Wages and salaries		**26,918**	25,716
Social security costs		**2,741**	3,013
Pension costs	33	**1,216**	1,357
Share-based payments		**3,057**	969
		33,932	31,055

Share-based payment charges include the IFRS 2 charge for the period and the charge relating to National Insurance on the outstanding potential share option gains.

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

9. Investment income

	2017 £'000	2016 £'000
Interest receivable on cash and bank balances, and treasury deposits	**192**	449

10. Tax

	Notes	2017 £'000	2016 £'000
Current tax – UK		**1,516**	1,546
Current tax – overseas		**(229)**	180
		1,287	1,726
Amounts (over)/under provided in previous years		**(1,102)**	4
Total current income tax		**185**	1,730
Deferred tax – origination and reversal		**279**	608
Adjustment in respect of prior years		**894**	714
Total deferred tax charge	21	**1,173**	1,322
Total tax expense for the year		**1,358**	3,052

The blended standard rate of tax for the year, based on the UK standard rate of corporation tax, is 19.25% (2016: 20.00%). Taxation for other jurisdictions is calculated at the rates prevailing in the respective jurisdictions.

The Finance (No 2) Act 2015 provided for a reduction in the main rate of corporation tax from 20% to 19%, which was effective from 1 April 2017, and a reduction to 18% effective from 1 April 2020. Finance Act 2016, provides for a further reduction in the main rate of corporation tax to 17% effective from 1 April 2020. These rate reductions have been reflected in the calculation of deferred tax at the balance sheet date.

The note to the cash flow statement (note 30) shows repayments of tax of £457,000 during the year (2016: payments of £303,000).

The closing deferred tax liability at 31 December 2017 has been calculated at 17% reflecting the tax rate at which the deferred tax liability is expected to be reversed in future periods. Details on deferred tax liabilities are disclosed in note 21.

In addition to the amount charged to the income statement and other comprehensive income, the following amounts relating to tax have been recognised directly in equity:

	2017 £'000	2016 £'000
Current tax		
Excess tax deductions related to share-based payments on exercised options	**(26)**	(483)
Excess tax deductions in relation to restructuring charges	**–**	(13)
	(26)	(496)
Deferred tax		
Arising on transactions with equity participants:		
Change in estimated excess tax deductions related to share-based payments	**46**	62
Total income tax recognised directly in equity	**20**	(434)

10. Tax continued

The charge for the year can be reconciled to the profit per the income statement as follows:

	2017 £'000	2016 £'000
Profit on ordinary activities before tax	**12,290**	17,853
Tax on ordinary activities at a blended standard rate of 19.25% (2016: 20.00%)	**2,366**	3,571
Effect of:		
Expenses not deductible for tax purposes	**518**	282
Non-deductible/(non-taxable) foreign exchange differences	**126**	(119)
Effect of different tax rates of subsidiaries operating overseas	**19**	69
Enhanced tax deduction for patent box	**(1,411)**	(1,114)
Effect of change in UK corporation tax rate on deferred tax	**(52)**	(355)
Prior year adjustments	**(208)**	718
Total tax expense for the year	**1,358**	3,052

The expenses not deductible for tax purposes mainly relate to depreciation on non-qualifying assets and share-based payments.

The effective tax rate for the year is 11% (2016: 17%). For 2017 if the prior year adjustments were excluded the effective tax rate would have been 13% (2016: 13%).

11. Dividends

	2017 £'000	2016 £'000
Amounts recognised as distributions to equity holders in the year:		
Final dividend for the year ended 31 December 2016 of 6.7p (2015: 6.3p) per share	**5,126**	4,808
Interim dividend for the year ended 31 December 2017 of 3.4p (2016: 3.3p) per share	**2,602**	2,520
Total distributions to equity holders in the year	**7,728**	7,328
Proposed final dividend for the year ended 31 December 2017 of 6.8p (2016: 6.7p) per share	**5,326**	5,212

The proposed final dividend is subject to approval by shareholders at the AGM and has not been included as a liability in these financial statements.

12. Earnings per ordinary share – basic and diluted

The calculation of basic and diluted earnings per share is based on the following data:

	2017 £'000	2016 £'000
Earnings		
Earnings for the purposes of basic earnings per share being net profit attributable to equity holders of the parent	**10,932**	14,801
Number of shares		
Weighted average number of ordinary shares for the purposes of basic earnings per share	**76,469,128**	76,246,300
Effect of dilutive potential ordinary shares:		
Share options	**1,441,475**	1,994,875
Weighted average number of ordinary shares for the purposes of diluted earnings per share	**77,910,603**	78,241,175

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

12. Earnings per ordinary share – basic and diluted continued

	2017 Pence per share	2016 Pence per share
Basic	**14.3p**	19.4p
Diluted	**14.0p**	18.9p

The weighted average number of ordinary shares for the purposes of basic earnings per share is calculated after the exclusion of ordinary shares in Xaar plc held by Xaar Trustee Ltd, the Xaar plc ESOP trust and the matching shares held in trust for the Share Incentive Plan.

For 2017, there were share options granted over 382,843 shares that had not been included in the diluted earnings per share calculation because they were anti-dilutive at the period end (2016: 22,758 shares).

The performance conditions for LTIP awards over 657,355 shares (2016: 1,109,652 shares) have not been met in the current financial period or are not expected to be met in future financial periods, and therefore the dilutive effect of those shares have not been included in the diluted earnings per share calculation.

Adjusted earnings per share

This adjusted earnings per share information is considered to provide a fairer representation of the Group's trading performance year on year, as it removes items which, in the Board's opinion, do not reflect the underlying performance of the Group.

The calculation of adjusted EPS excluding share-based payment charges, exchange differences relating to intra-group transactions, restructuring and acquisition expenses, is based on earnings of:

	2017 £'000	2016 £'000
Earnings for the purposes of basic earnings per share being net profit attributable to equity holders of the parent	**10,932**	14,801
Share-based payment charges	**3,057**	969
Exchange differences relating to intra-group transactions	**523**	60
Restructuring and acquisition expenses	**2,553**	1,205
Tax effect of adjusting items	**(929)**	(447)
Adjusted profit after tax	**16,136**	16,588
Adjusted profit after tax excluding the net of tax impact of IAS 38*	**11,959**	8,410

The denominators used are the same as those detailed above for both basic and diluted earnings per share.

Adjusted earnings per share is earnings per share excluding the items adjusted for as detailed above:

	2017 Pence per share	2016 Pence per share
Adjusted basic	**21.1p**	21.8p
Adjusted diluted	**20.7p**	21.2p
Adjusted basic excluding the impact of IAS 38*	**15.6p**	11.0p

Adjusted EPS is considered to provide a fairer representation of the Group's trading performance year on year.

* Adjusted profit after tax excluding the net of tax impact of IAS 38 and adjusted basic EPS excluding the impact of IAS 38 Capitalisation of Development Costs are the measures deemed most appropriate by the Remuneration Committee to determine the achievement of the performance conditions for the LTIP awards that are subject to the EPS performance conditions.

13. Goodwill

The carrying amount of goodwill at 31 December 2017 was £5,212,000 (2016: £5,776,000).

Goodwill acquired in a business combination is allocated, at acquisition, to the cash-generating units (CGUs) that are expected to benefit from that business combination. Goodwill occurred from the acquisition of EPS in July 2016.

The carrying amount of goodwill had been allocated as follows on page 111.

13. Goodwill continued

	2017 £'000	2016 £'000
Printheads and related products (a single CGU)		
Balance at the beginning of the year	**5,776**	–
Goodwill recognised in the year	**–**	5,776
Foreign currency translation	**(564)**	–
Balance at the end of the year	**5,212**	5,776

The Group tests goodwill annually for impairment or more frequently if there are indications that goodwill might be impaired. Having performed impairment testing, no impairment has been identified and therefore no impairment loss has been recognised in 2017 (2016: £nil).

The recoverable amount of the CGU is determined from a value-in-use calculation. The key assumptions to which the value-in-use calculation is most sensitive are those regarding the discount rates, growth rates and expected changes to selling prices and direct costs during the period.

The Group prepares cash flow forecasts derived from the most recent financial forecasts reviewed by management for the next three years and these have been used in the value-in-use calculation. The discount rate applied to the cash flow projections is 8.1% (2016: 5.4%) and reflects management's estimate of return on capital employed.

Sensitivity analysis has been completed on each key assumption in isolation and this indicates that reasonable changes in key assumptions on which we have based our determination of the recoverable amount would not cause the carrying amount of goodwill to exceed its recoverable amount.

14. Other intangible assets

	Capitalised development costs £'000	Licences acquired £'000	Software £'000	Total £'000
Cost				
At 1 January 2016	22,894	533	3,124	26,551
Additions	10,222	–	76	10,298
Acquisition	–	84	–	84
Transfers	–	–	(27)	(27)
At 1 January 2017	**33,116**	**617**	**3,173**	**36,906**
Additions	6,451	–	19	6,470
Transfers	(17)	(84)	101	–
Exchange movements	–	–	(6)	(6)
Disposals	–	–	(64)	(64)
At 31 December 2017	**39,550**	**533**	**3,223**	**43,306**
Amortisation				
At 1 January 2016	5,443	533	2,780	8,756
Charge for the year	492	–	295	787
At 1 January 2017	**5,935**	**533**	**3,075**	**9,543**
Charge for the year	1,124	–	25	1,149
Disposals	–	–	(64)	(64)
At 31 December 2017	**7,059**	**533**	**3,036**	**10,628**
Carrying amount				
At 31 December 2016	27,181	84	98	27,363
At 31 December 2017	**32,491**	**–**	**187**	**32,678**

14. Other intangible assets continued

Capitalised development costs relate to platform technology development and other associated product development. Included within capitalised development costs is a carrying amount of £30,857,000 relating to the P4 Thin Film platform, an architecture that will be used by the Group to generate multiple products across multiple markets. The estimated useful economic life of the platform is 20 years and the remaining amortisation period is 19 years.

The amortisation period for software is three to five years.

Licences acquired are amortised over their estimated useful lives which is on average ten years.

15. Property, plant and equipment

	Land and buildings £'000	Leasehold property £'000	Plant and machinery £'000	Furniture, fittings and equipment £'000	Assets in the course of construction £'000	Total £'000
Cost						
At 1 January 2016	–	13,634	65,044	4,110	1,739	84,527
Additions	1,152	671	8,696	78	910	11,507
Acquisition	–	387	613	260	–	1,260
Transfers	–	2	17	–	8	27
Exchange movements	78	236	966	57	–	1,337
Disposals	–	(31)	–	(13)	–	(44)
At 1 January 2017	**1,230**	**14,899**	**75,336**	**4,492**	**2,657**	**98,614**
Additions	–	185	4,673	134	485	5,477
Transfers	–	(78)	(744)	(12)	834	–
Exchange movements	(105)	(69)	(123)	(47)	(2)	(346)
Disposals	–	–	(930)	(378)	–	(1,308)
At 31 December 2017	**1,125**	**14,937**	**78,212**	**4,189**	**3,974**	**102,437**
Depreciation						
At 1 January 2016	–	7,709	42,317	3,246	–	53,272
Charge for the year	57	1,435	6,080	279	–	7,851
Exchange movements	–	208	923	38	–	1,169
Disposals	–	(21)	–	(9)	–	(30)
At 1 January 2017	**57**	**9,331**	**49,320**	**3,554**	**–**	**62,262**
Charge for the year	–	1,482	6,124	189	–	7,795
Exchange movements	–	(15)	(72)	(47)	–	(134)
Disposals	–	–	(579)	(378)	–	(957)
At 31 December 2017	**57**	**10,798**	**54,793**	**3,318**	**–**	**68,966**
Carrying amount						
At 31 December 2016	1,173	5,568	26,016	938	2,657	36,352
At 31 December 2017	**1,068**	**4,139**	**23,419**	**871**	**3,974**	**33,471**

As at 31 December 2017 the Group had entered into contractual commitments for the acquisition of property, plant and equipment amounting to £1,030,000 (2016: £2,295,000).

16. Subsidiaries

A list of the investments in subsidiaries, including the name, country of incorporation and proportion of ownership interest, is given in note 9 to the Company's separate financial statements.

17. Investments

	2017 £'000	2016 £'000
Held-to-maturity investments		
At beginning of the year	**1,000**	1,000
Disposals	**(1,000)**	–
At the end of the year	**–**	1,000

Held-to-maturity investments were bonds returning interest at 3% per annum, which were due to mature on 22 November 2018. The option to redeem the bonds was exercised on 21 November 2017.

18. Inventories

	2017 £'000	2016 £'000
Raw materials and consumables	**8,533**	6,465
Work in progress	**3,027**	2,153
Finished goods	**7,559**	5,172
	19,119	13,790

19. Other financial assets

The fair value of all financial assets and financial liabilities approximates their carrying value.

Receivables

	2017 £'000	2016 £'000
Non-current portion of Trade Receivables	**858**	1,516

The non-current receivable relates to a last time buy offer and has a settlement term of 23 months. A Fair Value assessment was carried out, however, due to the immaterial value of the estimate, no adjustment was made in the non-current valuation of the receivable balance.

Trade and other receivables

	2017 £'000	2016 £'000
Amount receivable for the sale of goods	**25,722**	15,210
Allowance for doubtful debts	**(510)**	(480)
	25,212	14,730
Other debtors	**2,373**	3,248
Prepayments	**2,718**	2,362
	30,303	20,340

Current tax asset	**3,412**	3,029

No amounts are expected to be settled in more than 12 months.

19. Other financial assets continued

Trade receivables

The average credit period taken on sales of goods is 92 days (2016: 62 days). No interest is charged on the receivables for the period agreed in the Requirements Contract or, if not specified or applicable, the first 30 days from the date of the invoice. Thereafter, the Group reserves the right to charge interest at a daily rate of the greater of either 3% per annum above the base rate of the Bank of England from time to time, or the maximum rate of interest allowable under the Late Payment of Commercial Debts (Interest) Act 1998, on all sums outstanding until payment in full is received. The Group provides for receivables over 90 days based on estimated irrecoverable amounts determined by reference to past default experience of the counterparty and an analysis of the counterparty's current financial position.

The maximum exposure to credit risk is the carrying amount of the financial assets as disclosed on page 113. Before accepting any new customer, the Group uses an external credit scoring system to assess the potential customer's credit quality and defines credit limits by customer. Credit limits are reviewed at least once per year. Letters of credit may be used. Credit insurance has typically been taken out over the most significant customers. Of the trade receivables balance at the end of the year, four customers each represented greater than 5% of the total receivables balance, totalling £16.9 million (2016: £9.3 million). The total due from these customers represents 17% (2016: 10%) of the Group's revenue.

Included in the Group's trade receivables balance are debtors with a carrying amount of £4.7 million (2016: £2.8 million) which are past due at the reporting date for which the Group has not provided as there has not been a significant change in credit quality and the amounts are still considered recoverable. Of these amounts, the Group is in possession of letters of credit to the value of £1,867,000 (2016: £853,000) which had not reached maturity as at the reporting date. The Group does not hold any other collateral over these balances. The average age of these receivables is 72 days (2016: 83 days).

Ageing of past due but not impaired receivables:

	2017 £'000	2016 £'000
1–30 days overdue	**2,886**	537
30–60 days overdue	**358**	431
60–90 days overdue	**257**	(45)
90–120 days overdue	**273**	164
Over 120 days overdue	**67**	190
Total	**3,841**	1,277
Non-current receivables		
Over 12 months	**858**	1,516
Total receivables	**4,699**	2,793

Movement in the allowance for doubtful debts:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**480**	342
Impairment losses increased	**30**	138
Balance at the end of the year	**510**	480

In determining the recoverability of a trade receivable, the Group considers any change in the credit quality of the trade receivable from the date credit was initially granted up to the reporting date. The concentration of credit risk is limited due to the customer base being large and unrelated. Accordingly, the Directors believe that there is no further credit provision required in excess of the allowance for doubtful debts.

19. Other financial assets continued

Trade receivables continued

Ageing of impaired trade receivables:

	2017 £'000	2016 £'000
Current	**190**	222
1–30 days overdue	**–**	20
30–60 days overdue	**–**	3
60–90 days overdue	**–**	–
90–120 days overdue	**–**	5
Over 120 days overdue	**320**	230
Total	**510**	480

The Directors consider that the carrying amount of trade and other receivables approximates their fair value.

Treasury deposits

Treasury deposits comprise bank deposits with an original maturity of between three months and 12 months. The carrying amount of these assets approximates their fair value.

	2017 £'000	2016 £'000
Treasury deposits	**753**	–

Cash and cash equivalents

Cash and cash equivalents comprise cash held by the Group and short term bank deposits with an original maturity of three months or less. The carrying amount of these assets approximates their fair value.

The analysis of cash and short term bank deposits is as follows:

	2017 £'000	2016 £'000
Cash	**43,944**	49,321

The credit risk on liquid funds and derivative financial instruments is limited because the counterparties are banks with high credit ratings assigned by international credit rating agencies.

20. Financial instruments

Categories of financial instruments

Financial assets of £73,193,000 (2016: £68,815,000) are categorised as cash, treasury deposits and trade and other receivables. Financial liabilities of £16,750,000 (2016: £14,571,000) are categorised as trade and other payables and other financial liabilities.

Financial risk management objectives

The Group's policy is to manage the Group's financial risk, secure cost effective funding for the Group's operations and to minimise the adverse effects of fluctuations in the financial markets on the value of the Group's financial assets and liabilities, on reported profitability and on the cash flows of the Group.

The Group finances its activities with a combination of cash and treasury deposits. Other financial assets and liabilities, such as trade debtors and trade creditors, arise directly from the Group's operating activities.

Financial instruments give rise to foreign currency, interest rate, credit and liquidity risk. The Group's management of its exposure to credit risk is discussed in note 19 and to liquidity risk is discussed in note 23.

20. Financial instruments continued

Interest rate risk

As the Group currently has no borrowings, its exposure to interest rate risk relates to the interest rate on its cash, cash equivalent and treasury deposit balances.

The Group's exposure has been calculated with reference to these balances as at the year end. A 2% increase or a reduction to 0% represents management's assessment of the reasonably possible change in interest rates.

If interest rates had been 2% higher/reduced to 0% and all other variables were held constant, the Group's profit for the year ended 31 December 2017 would increase by £0.9 million or decrease by £0.2 million (2016: increase by £1.4 million/decrease by £0.5 million). There would be no effect on equity reserves.

Foreign currency risk

The Group receives approximately 28% of its revenues in US Dollars and 8% of its revenue in Euros, which are partially naturally hedged by supplies in these currencies, but the remainder requires conversion into Sterling in order to fund the remaining costs of the UK operations. The Group had a manufacturing facility in Sweden which was closed in 2016 and legacy working capital balances denominated in Swedish Kronor remain in the Group's Swedish companies prior to the dissolution of these entities.

The Group is mainly exposed to foreign currency risk resulting from transactions in US Dollars, Euros and Swedish Kronor. The following table demonstrates the Group's sensitivity to a 10% increase and decrease in the Sterling exchange rate against the relevant foreign currencies on the Group's profit before tax and equity (due to changes in the fair value of monetary assets, liabilities and forward currency contracts). 10% represents management's assessment of the reasonably possible movement in exchange rates. The sensitivity analysis includes only outstanding foreign currency denominated monetary items and adjusts their translation at the period end for a 10% change in foreign currency rates. The sensitivity analysis includes inter company balances within the Group where the denomination of the balance is in a currency other than the functional currency of the debtor or the creditor. A positive number below indicates an increase in profit or equity.

	Euro currency impact		US Dollar currency impact		Swedish Kronor currency impact	
	2017 £'000	2016 £'000	**2017 £'000**	2016 £'000	**2017 £'000**	2016 £'000
Effect of a 10% increase in relevant exchange rate on:						
Profit or loss	**(200)**	(312)	**(927)**	(637)	**(144)**	(73)
Other equity	**–**	–	**(289)**	113	**151**	376
Effect of a 10% decrease in relevant exchange rate on:						
Profit or loss	**245**	382	**1,132**	779	**176**	89
Other equity	**–**	–	**353**	82	**(185)**	(240)

20. Financial instruments continued

Capital risk management

The primary objective of the Group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business, maximise shareholder value and provide flexibility for value enhancing investments. The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions or as a result of corporate strategy. To maintain or adjust the capital structure, the Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. In addition, any potential value enhancing investments may be funded through additional debt instruments. No changes were made in the objectives, policies or processes during the current or prior year, except for the proposed increase in final dividend for 2017, as detailed in note 11 on page 109.

The Group monitors capital using a gearing ratio, which is determined as the proportion of debt to equity. Debt is defined as long and short term borrowings. Equity includes all capital and reserves of the Group attributable to the equity holders of the parent. The Group's policy for its existing business is to use debt where appropriate, whilst maintaining the gearing ratio at a level under 10%.

The gearing ratio at the year-end is as follows:

	2017 £'000	2016 £'000
Net debt	**–**	–
Equity	**147,748**	140,456
Gearing ratio	**0%**	0%

The Group is not subject to externally imposed capital requirements.

Credit risk management

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group has adopted a policy of only dealing with creditworthy counterparties and obtaining sufficient collateral where appropriate, as a means of mitigating the risk of financial loss from defaults.

Trade receivables consist of a large number of customers, spread across different industries and geographical areas. Ongoing credit evaluation is performed on the financial condition of accounts receivable.

The credit risk on liquid funds is limited because the counterparties are banks with high credit ratings assigned by international credit rating agencies.

21. Deferred tax

The following are the major deferred tax liabilities and assets recognised by the Group and movements thereon during the current and prior reporting periods:

	Accelerated tax depreciation £'000	Share-based payment £'000	Untaxed reserves £'000	Tax losses £'000	Other temporary difference £'000	Total £'000
At 1 January 2016	2,230	(478)	301	(591)	(240)	1,222
Charge/(credit) to income	1,388	(80)	(301)	387	(73)	1,322
Charge to equity	–	62	–	–	–	62
Acquisition of subsidiary	–	–	–	–	81	81
At 1 January 2017	**3,618**	**(496)**	**–**	**(204)**	**(232)**	**2,686**
Charge/(credit) to income	1,601	(99)	–	99	(428)	1,173
Charge to equity	–	46	–	–	–	46
At 31 December 2017	**5,219**	**(549)**	**–**	**(105)**	**(660)**	**3,905**

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

21. Deferred tax continued

Certain deferred tax assets and liabilities have been offset. The following is the analysis of the deferred tax balances (after offset) for financial reporting purposes:

	2017 £'000	2016 £'000
Deferred tax liabilities	**3,905**	2,686

The increase in the deferred tax liability arose from increased claims for 100% research and development allowances and also from an election to treat capitalised research and development expenditure as revenue.

As at 31 December 2017, the Group has unused capital losses of £1.1 million (2016: £1.1 million) available for offset against future gains. No deferred tax asset has been recognised in respect of these capital losses as it is not considered probable that there will be future chargeable gains available. These losses may be carried forward indefinitely.

22. Trade and other payables

	2017 £'000	2016 £'000
Trade payables and accruals	**16,583**	14,314

Trade payables and accruals principally comprise amounts outstanding for trade purchases and ongoing costs. The average credit taken for trade purchases is 31 days (2016: 17 days).

The Directors consider that the carrying amount of trade payables approximates to their fair value.

23. Other financial liabilities

Other financial liabilities consist of lease incentives.

The borrowings are repayable as follows:

	2017 £'000	2016 £'000
Within one year	**30**	69
In the second year	**31**	40
In the third to fifth years inclusive	**71**	86
Over five years	**35**	62
	167	257
Less: amount due for settlement within 12 months (shown under current liabilities)	**(30)**	(69)
Amount due for settlement after 12 months	**137**	188

The amounts included above are not considered to be materially different from the present value of their carrying amounts.

Liquidity risk

The Group aims to mitigate liquidity risk by managing cash generation by its operations and applying cash collection targets throughout the Group. Investment is carefully controlled, with authorisation limits operating up to Group Board level and cash payback periods applied as part of the investment appraisal process. In this way the Group aims to maintain a good credit rating to facilitate fund raising.

In its funding strategy, the Group's objective is to maintain a balance between continuity of funding and flexibility through the use of overdrafts, bank loans, finance leases and hire purchase contracts. The Group manages liquidity risk by maintaining adequate reserves and banking facilities by continually monitoring cash flows and matching the maturity profiles of financial assets and liabilities.

Non-derivative financial liabilities of £16,750,000 (2016: £14,571,000) comprise trade creditors of £16,583,000 and lease incentives of £167,000. The trade creditors are within current liabilities. Of the lease incentives, £30,000 are within current liabilities and £137,000 within non-current liabilities with a range of maturity dates which are set out above. The inherent liquidity risk of these financial liabilities is managed within the overall liquidity risk of the Group as described above.

23. Other financial liabilities continued

Liquidity risk continued

The Group is inherently a net generator of cash at the operating level. Excess cash used in managing liquidity is only invested in financial instruments exposed to insignificant risk of changes in market value, being placed on interest-bearing deposit with maturities no more than 12 months allowed per the policy. Short term flexibility is achieved by overdraft facilities.

24. Provisions

	Warranty and commercial agreements £'000	Restructuring £'000	Total £'000
At 1 January 2016	304	3,229	3,533
Additional provision in the year	81	–	81
Utilisation of provision	(159)	(2,614)	(2,773)
Release of provision	(67)	–	(67)
At 1 January 2017	**159**	**615**	**774**
Additional provision in the year	231	1,125	1,356
Utilisation of provision	(128)	–	(128)
Release of provision	(91)	–	(91)
At 31 December 2017	**171**	**1,740**	**1,911**

The warranty and commercial agreements provision represents management's best estimate of the Group's liability related to claims against product warranties or commercial sales agreements. The timing of the utilisation of this provision is uncertain.

During 2017, the Group committed to consolidate its office and research facilities in the Cambridge area. Following the announcement of the plan, the Group has recognised a provision of £1,099,000 for expected restructuring costs, including accelerated depreciation of leasehold property, dilapidation costs of restoring the leases to their original condition, and rent, service charge and business rates on the related lease contracts which had become onerous. It is not expected that the Group will sublet the leases. The remaining provision of £641,000 represents the balance of the estimated final costs of the closure of the manufacturing facility in Sweden.

25. Share capital

	2017 £'000	2016 £'000
Issued and fully paid:		
78,329,296 (2016: 77,776,755) ordinary shares of 10.0p each	**7,833**	7,778

The Companies Act 2006 abolished the legal requirement for a company to have an authorised share capital. The Articles of Association were amended to remove the authorised share capital article following approval via special resolution at the AGM on 19 May 2010.

The movement during the year on the Company's issued and fully paid shares was as follows:

	2017 Number	2016 Number	**2017 £'000**	2016 £'000
At beginning of year	**77,776,755**	77,635,374	**7,778**	7,764
Exercise of share options	**552,541**	141,381	**55**	14
At end of year	**78,329,296**	77,776,755	**7,833**	7,778

The Company has one class of ordinary shares which carry no right to fixed income.

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

25. Share capital continued

Scheme	Date of grant	Number of shares under option as at 31 December 2017	Number of shares under option as at 31 December 2016	Subscription price per share
Xaar plc 2004 Share Option Plan	21 August 08	**1,000**	1,000	108.25p
	22 November 10	**10,000**	10,000	211.0p
	1 June 11	**75,091**	102,591	250.0p
	1 May 12	**105,000**	172,500	226.5p
		191,091	286,091	
Xaar plc Share Save Scheme	1 November 13	**–**	2,568	616.0p
	1 November 14	**54,896**	486,240	338.0p
	1 November 15	**170,759**	227,980	417.0p
	1 November 16	**147,297**	210,649	407.0p
		372,952	927,437	
Xaar plc 2017 Share Save Scheme	1 November 17	**389,243**	–	344.0p
		389,243	–	
Xaar plc Share Incentive Plan	17 April 13	**13,796**	17,472	0.0p
	16 April 14	**15,973**	20,092	0.0p
	14 April 16	**23,070**	27,335	0.0p
	13 April 17	**12,174**	–	0.0p
		65,013	64,899	
Total share options outstanding at 31 December		**1,018,299**	1,278,427	

Options granted under the Xaar plc 2004 Share Option Plan are ordinarily exercisable within three to ten years after the date of the grant. The maximum value of approved options, under the Xaar plc 2004 Share Option Plan, which may be granted to individual employees is £30,000.

Options under the Xaar plc Share Save Scheme are ordinarily exercisable between 36 and 42 months after the date of the grant.

Awards under the Xaar plc Share Incentive Plan are ordinarily exercisable between three and five years after the date of the grant.

25. Share capital continued

Long Term Incentive Plan

Performance Share Awards outstanding under the Xaar plc 2007 Long Term Incentive Plan are as follows:

Date of grant	Number of shares under option as at 31 December 2017	Number of shares under option as at 31 December 2016
3 May 11	**7,081**	14,762
2 April 12	**60,417**	120,834
1 May 12	**80,599**	88,162
2 April 14	**–**	194,636
12 May 14	**–**	34,083
2 April 15	**489,780**	547,795
28 September 15	**23,926**	37,896
7 December 15	**12,088**	12,088
1 April 16	**400,936**	484,796
11 May 16	**59,027**	69,838
27 May 16	**18,000**	18,000
25 August 16	**57,710**	69,121
6 September 16	**8,250**	9,150
1 December 16	**29,840**	29,840
	1,247,654	1,731,001

All awards under this scheme are exercisable within three to ten years after the date of grant.

Performance share awards have been made under the Xaar plc 2017 Long Term Incentive Plan as follows:

Date of grant	2017 Number of shares	2016 Number of shares
16 May 17	**745,291**	–
	745,291	–

All awards under this scheme are exercisable within three to ten years after the date of grant.

26. Share premium account

	£'000
Balance at 1 January 2016	27,585
Premium arising on issue of equity shares	269
Balance at 1 January 2017	**27,854**
Premium arising on issue of equity shares	1,463
Balance at 31 December 2017	**29,317**

27. Own shares

	£'000
Balance as at 1 January 2016	(3,796)
Transfer to share incentive plan	154
Balance at 1 January 2017 and 31 December 2017	**(3,642)**

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

27. Own shares continued

Of this balance, £20,000 (2016: £20,000) represents 91,250 ordinary shares in Xaar plc held in trust by Xaar Trustee Limited. Xaar Trustee Limited was formed in 1995 to act as Trustee to the Employee Benefit Trust established in 1995 to hold shares for the benefit of the employees of the Company and the Group. There has been no movement in the number of shares held in trust by Xaar Trustee Ltd during the year.

The remaining balance of £3,622,000 (2016: £3,622,000) represents the cost of 1,317,727 (2016: 1,317,727) shares in Xaar plc purchased in the market at market value and held by the Xaar plc ESOP trust to satisfy options granted under the Company's share option schemes.

The market value of own shares as at 31 December 2017 was £5,210,000 (2016: £5,636,000).

28. Translation reserve

	£'000
Balance at 1 January 2016	99
Exchange differences on retranslation of net investment	708
Balance at 1 January 2017	**807**
Exchange differences on retranslation of net investment	(194)
Balance at 31 December 2017	**613**

Exchange differences relating to the translation of the net assets of the Group's foreign operations, which relate to subsidiaries only, from their functional currency into the parent's functional currency, being Sterling, are recognised directly in the translation reserve.

29. Retained earnings and other reserves

	Notes	Merger reserve £'000	Share-based payments £'000	Other reserves £'000	Total other reserves £'000	Retained earnings £'000	Total £'000
Balance at 1 January 2016		1,105	9,416	485	11,006	87,880	98,886
Net profit for the year		–	–	–	–	14,801	14,801
Share issue related to LTIP awards		–	–	–	–	(2)	(2)
Own shares acquired in the period		–	–	–	–	(17)	(17)
Dividends paid	11	–	–	–	–	(7,328)	(7,328)
Tax taken directly to equity		–	–	–	–	434	434
Movement in valuation of share options		–	885	–	885	–	885
Balance at 1 January 2017		**1,105**	**10,301**	**485**	**11,891**	**95,768**	**107,659**
Net profit for the year		–	–	–	–	10,932	10,932
Dividends paid	11	–	–	–	–	(7,728)	(7,728)
Tax taken directly to equity		–	–	–	–	(20)	(20)
Exchange differences on retranslation of net investment		–	–	–	–	(527)	(527)
Movement in valuation of share options		–	2,747	–	2,747	–	2,747
Balance at 31 December 2017		**1,105**	**13,048**	**485**	**14,638**	**98,425**	**113,063**

The merger reserve and other reserves are not distributable. The merger reserve represents the share premium account in Xaar Technology Limited. The share-based payment reserve represents the cumulative charge made under IFRS 2 in relation to share options and LTIP awards. Other reserves represent the non-distributable portion of the dividend received in Xaar plc from Xaar Digital Limited.

30. Notes to the cash flow statement

	2017 £'000	2016 £'000
Profit before tax	**12,290**	17,853
Adjustments for:		
Share-based payments	**3,057**	969
Depreciation of property, plant and equipment	**7,795**	7,851
Amortisation of intangible assets	**1,149**	787
Research and development expenditure credit	**(411)**	(605)
Investment income	**(186)**	(449)
Foreign exchange losses/(gains)	**32**	(956)
Loss/(profit) on disposal of property, plant and equipment	**351**	(3)
Increase/(decrease) in provisions	**1,133**	(2,759)
Operating cash flows before movements in working capital	**25,210**	22,688
(Increase)/decrease in inventories	**(5,071)**	2,841
Increase in receivables	**(9,226)**	(8,910)
Increase/(decrease) in payables	**1,103**	(2,381)
Cash generated by operations	**12,016**	14,238
Income taxes received/(paid)	**457**	(303)
Net cash from operating activities	**12,473**	13,935

31. Operating lease arrangements

	2017 £'000	2016 £'000
Minimum lease payments under operating leases recognised as an expense in the year:		
Fixtures, fittings and equipment	**93**	104
Land and buildings	**1,689**	2,183
	1,782	2,287

At the date of the statement of financial position, the Group had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall due as follows:

	Fixtures, fittings and equipment		Land and buildings	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Within one year	**76**	96	**1,539**	1,608
In the second to fifth years inclusive	**94**	149	**2,402**	2,842
After five years	**–**	–	**523**	909
	170	245	**4,464**	5,359

The operating leases in respect of fixtures, fittings and equipment extend over a period of up to five years.

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

32. Share-based payments

Equity-settled share option scheme

The Company's share option schemes are open to all employees of the Group. Options are exercisable at a price equal to the average quoted market price of the Company's shares on the date of grant. The standard vesting period is three years.

An option granted under the Xaar plc 2004 Share Option Plan before 2011 will be exercisable over shares with a market value at the date of grant not exceeding a person's annual salary if at the third anniversary of grant the EPS growth of the Company since grant has exceeded the growth in the Retail Prices Index (RPI) over the same period by at least 12%. To the extent that an option relates to shares with a market value as at the date of grant in excess of a person's annual salary, the option will be exercisable over all of the excess shares if EPS growth over this period has exceeded RPI growth by at least 15%. For EPS performance between these two points, options will be exercisable over the excess shares on a sliding scale. In addition, options can only be exercised if EPS is at least 5.5 pence for the financial year preceding the third anniversary of grant. Performance may be retested once only from the date of grant to the fourth or fifth anniversary of grant (at the discretion of the Remuneration Committee), but the original EPS growth targets will be increased from 12/15% to 16/20% and 20/25% respectively. The 5.5 pence target will apply for the final financial year in the extended period.

An option granted under the Xaar plc 2004 Share Option Plan from 2011 onwards will be exercisable over shares with a market value at the date of grant not exceeding a person's annual salary, if at the third anniversary of grant, Xaar plc has achieved positive adjusted profit before tax as shown in the consolidated income statement in the Company's Annual Report and financial statements for any of the three years ending during the vesting period. One third of the shares subject to the option granted rounded to the nearest whole share, will vest based on the performance condition being met per year for each of the three years ending in the vesting period. If the adjusted profit before tax as shown in the consolidated income statement in Xaar plc's Annual Report and financial statements for any relevant year is restated before the option becomes exercisable, the restated figure shall, unless the Remuneration Committee determines otherwise, be applied in determining whether the above targets are met. In addition, options shall only become exercisable in respect of any shares if the Committee in its absolute discretion determines that the overall financial performance of Xaar plc over the performance period is satisfactory.

The Xaar 2007 and 2017 Share Save Schemes provide an opportunity to all UK employees to save a set monthly amount (up to £250 pre 2014, up to £500 from 2014) over three years towards the exercise of a discounted share option, which is granted at the start of the three years.

The Xaar Share Incentive Plan provides an opportunity for all UK employees to buy shares from their pre-tax remuneration up to the limit permitted by the relevant tax legislation (£1,500 per year for the awards made in 2013 and 2014, £1,800 per year for awards made from 2015) and are awarded additional shares for free on a matching basis; the Company currently operates the plan on the basis of a 1:1 match but may award matching shares up to the maximum ratio permitted by the relevant tax legislation (currently a 2:1 ratio).

Options and awards under the Xaar 2007 and 2017 Share Save Schemes and Xaar Share Incentive Plan are not subject to performance conditions.

If the options remain unexercised after a period of ten years from the date of grant, or 42 months in the case of the Share Save Scheme, or five years in the case of the Share Incentive Plan (being the contractual lives), the options expire. Save as permitted in the share option scheme rules, options lapse on an employee leaving the Group.

Details of the share options outstanding during the year are as follows:

	2017		2016	
	Number of share options	**Weighted average exercise price (£)**	Number of share options	Weighted average exercise price (£)
Outstanding at beginning of year	**1,280,204**	**3.14**	1,259,654	3.14
Granted during the year	**411,576**	**3.33**	243,467	3.57
Lapsed during the year	**(186,840)**	**3.83**	(97,552)	4.25
Exercised during the year	**(486,641)**	**3.10**	(125,365)	2.25
Outstanding at the end of the year	**1,018,299**	**3.22**	1,280,204	3.14
Exercisable at the end of the year	**275,756**	**2.30**	306,131	2.25

The weighted average share price at the date of exercise for share options exercised during the period was £4.58 (2016: £4.61). The options outstanding at 31 December 2017 had a weighted average remaining contractual life of three years (2016: four years). In 2017, options were granted on 13 April and 1 November. The aggregate of the estimated fair values of the options granted on those dates is £0.61 million. In 2016, options were granted on 14 April and 1 November. The aggregate of the estimated fair values of the options granted on those dates is £0.58 million.

32. Share-based payments continued

Equity-settled share option scheme continued

The inputs into the Black-Scholes model are as follows:

	2017	2016
Weighted average share price	**£4.28**	£5.04
Weighted average exercise price	**£3.33**	£4.03
Weighted average expected volatility	**35%**	51%
Expected life	**3 years**	3 years
Risk-free rate	**0.50%**	0.33%
Weighted average expected dividends	**0.59%**	0.56%

Expected volatility was determined by calculating the historical volatility of the Group's share price over periods ranging from the previous one to three years. The expected life used in the model has been adjusted, based on management's best estimate, for the effects of non-transferability, exercise restrictions and behavioural considerations.

Long Term Incentive Plan

The Company's Long Term Incentive Plan is open to all employees of the Group.

All LTIP share awards granted before 2015 are subject to the achievement of EPS performance conditions, the number of shares that vest will depend on the EPS growth of the Company for the three financial years of the Company commencing on 1 January of the year of grant, as follows:

(1) None of the Awards will vest if the Company's EPS growth does not exceed growth in the Retail Prices Index (RPI) by at least 4% compound p.a.
(2) 35% of the Awards will vest if the Company's EPS growth exceeds growth in the RPI by at least 4% compound p.a.
(3) All of the Awards will vest if the Company's EPS growth exceeds growth in the RPI by at least 10% compound p.a.
(4) Awards will vest on a straight-line basis for EPS growth in excess of growth in the RPI of between 4% and 10% compound p.a.

LTIP share awards granted in 2015 onwards are subject to the achievement of different performance conditions depending on the level of the employee. The number of shares that vest will depend on achievement of performance conditions for the three financial years of the Company commencing on 1 January of the year of grant, and are subject to one, two, three or four of the conditions as set out below:

(1) Absolute cumulative EPS performance over the period, whereby 25% of the Awards will vest if the threshold target is achieved, below threshold 0% will vest and up to a maximum of 100% if the maximum EPS target or higher is achieved.
(2) For 2015 and 2016 grants,TSR relative to FTSE TechMARK All Share Index, whereby 25% of the Awards will vest if the median rank in the comparator group is achieved, below median 0% will vest and up to a maximum of 100% if the upper quartile or higher is achieved. For 2017 grants,TSR outperformance multiplier determined by comparison to the FTSE Small Cap Index, whereby a performance multiplier of between 116.7% (for upper quartile performance) and 150% or 200% (for upper decile performance) is applied to the base award relating to awards granted with EPS and revenue performance conditions.
(3) Achievement of positive adjusted profit before tax as shown in the consolidated income statement in the Company's Annual Report and Accounts for any of the three years ending during the vesting period. One third of the shares subject to the option granted rounded to the nearest whole share, will vest based on the performance condition being met per year for each of the three years ending in the vesting period. If the adjusted profit before tax as shown in the consolidated income statement in Xaar plc's Annual Report and Accounts for any relevant year is restated before the option becomes exercisable, the restated figure shall, unless the Remuneration Committee determines otherwise, be applied in determining whether the above targets are met. In addition, options shall only become exercisable in respect of any shares if the Committee in its absolute discretion determines that the overall financial performance of Xaar plc over the performance period is satisfactory.
(4) From 2017, revenue growth over the period, whereby 25% of the Awards will vest if the threshold target is achieved, below threshold 0% will vest and up to a maximum of 100% if the maximum revenue growth target or higher is achieved.

There are also a number of LTIP share awards granted that are subject to the achievement of different performance conditions for specific individuals, dependent on revenue or profit performance over a set performance period.

In addition, options shall only become exercisable in respect of any shares if the Committee in its absolute discretion determines that the overall financial performance of Xaar plc over the performance period is satisfactory. All awards that will vest will be calculated on a straight-line basis. All awards made under this scheme are exercisable within three to ten years after the date of grant. Save as permitted in the Long Term Incentive Plan rules, awards lapse on an employee leaving the Group.

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

32. Share-based payments continued

Long Term Incentive Plan continued

Key individuals have previously been invited to participate in a bonus matching scheme where matching LTIP share awards are granted when the employee invests their bonus in Xaar shares and retains ownership of these shares for the duration of the LTIP share award vesting period. The matching share award is a 1 for 1 match on the pre-tax value of the bonus used to acquire bonus investment shares. Matching LTIP share awards are subject to the same performance criteria as all other LTIP awards.

Details of performance share awards outstanding during the year are as follows:

	2017	2016
Awards outstanding at start of year	**1,731,001**	1,543,345
Granted during the year	**770,091**	684,395
Lapsed during the year	**(432,023)**	(479,574)
Exercised during the year	**(76,124)**	(17,165)
Awards outstanding at end of year	**1,992,945**	1,731,001
Exercisable at the end of the year	**148,097**	223,758

The weighted average share price at the date of exercise for awards exercised during the period was £3.65 (2016: £4.37). The options outstanding at 31 December 2017 had a weighted average remaining contractual life of eight years (2016: eight years). In 2017, Performance Share Awards were made on 16 May. The aggregate of the estimated fair values of grants made on those dates is £2.8 million. In 2016, Performance Share Awards were made on 1 April, 11 May, 27 June, 25 August, 6 September and 1 December. The aggregate of the estimated fair values of grants made on those dates is £3.2 million.

The estimated fair values for grants with non-market based performance conditions were calculated using the Black-Scholes model. The inputs into the Black-Scholes model were as follows:

	2017	2016
Weighted average share price	**£3.75**	£4.82
Weighted average exercise price	**£nil**	£nil
Weighted average expected volatility	**50%**	53%
Weighted average expected life	**6 years**	7 years
Weighted average risk free rate	**0.48%**	0.99%
Weighted average expected dividends	**0.67%**	0.50%

The estimated fair values for grants with market based performance conditions were calculated using the Monte Carlo model. The inputs into the Monte Carlo model were as follows:

	2017	2016
Weighted average share price	**£3.75**	£4.87
Weighted average exercise price	**£nil**	£nil
Weighted average expected volatility	**42%**	57%
Weighted average expected life	**3 years**	3 years
Weighted average risk free rate	**0.12%**	0.43%
Weighted average expected dividends	**2.66%**	1.94%

The Group recognised total expenses of £2,747,000 and £885,000 related to all equity-settled share-based payment transactions in 2017 and 2016 respectively.

33. Retirement benefit schemes

Defined contribution schemes

The UK-based employees of the Group's UK companies have the option to be members of a defined contribution pension scheme managed by a third party pension provider. For each employee who is a member of the scheme the Company will contribute a fixed percentage of each employee's salary to the scheme. The only obligation of the Group with respect to this scheme is to make the specified contributions.

The total cost charged to the income statement in respect of these schemes during 2017 was £1,216,000 (2016: £1,357,000). As at 31 December 2017 contributions of £128,000 (2016: £147,000) due in respect of the current reporting period had not been paid over to the schemes.

34. Related party transactions

Transactions between the Company and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note.

Remuneration of key management personnel

The remuneration of the Directors, who are the key management personnel of the Group, is set out below in aggregate for each of the categories specified in IAS 24 Related Party Disclosures. Further information about the remuneration of individual Directors is provided in the audited part of the Directors' Remuneration report on page 60.

	2017 £'000	2016 £'000
Short term employee benefits	**1,195**	1,180
Post-employment benefits	**76**	74
Share-based payments	**597**	(131)
	1,868	1,123

Company balance sheet
as at 31 December 2017

	Notes	2017 £'000	2016 £'000 (Restated note 10)
Fixed assets			
Investments	3	**25,473**	23,547
		25,473	23,547
Current assets			
Held-to-maturity investments	3	**–**	1,000
Debtors – due within one year	4	**61,733**	87,026
Debtors – due after one year	4	**135**	139
Cash at bank and in hand		**9,323**	11,419
		71,191	99,584
Creditors: amounts falling due within one year	5	**(11,859)**	(33,790)
Net current assets		**59,332**	65,794
Total assets less current liabilities		**84,805**	89,341
Net assets		**84,805**	89,341
Capital and reserves			
Called up share capital	7	**7,833**	7,778
Share premium account	7	**29,317**	27,854
Other reserves		**35,169**	33,249
Own shares		**(3,622)**	(3,622)
Share-based payment reserve		**3,214**	2,387
Profit and loss account		**12,894**	21,695
Equity shareholders' funds		**84,805**	89,341

Xaar plc reported a loss for the financial year ended 31 December 2017 of £1,067,000 (2016: profit of £22,313,000).

The financial statements of Xaar plc, registered number 3320972, were approved by the Board of Directors and authorised for issue on 21 March 2018. They were signed on its behalf by:

D. Edwards

Doug Edwards
Chief Executive Officer

Lily Liu
Chief Financial Officer and Company Secretary

Company statement of changes in equity for the year ended 31 December 2017

	Notes	Called up share capital £'000	Share premium account £'000	Other reserves £'000	Own shares £'000	Share-based payments £'000	Profit and loss account £'000	Total £'000
At 1 January 2016 (as previously reported)		7,764	27,585	25,333	(3,776)	2,393	6,729	66,028
Prior period adjustment		–	–	7,023	–	–	–	7,023
At 1 January 2016 (restated)		7,764	27,585	32,356	(3,776)	2,393	6,729	73,051
Profit for the financial year		–	–	–	–	–	22,313	22,313
Total comprehensive income for the period		–	–	–	–	–	22,313	22,313
New shares issued		14	269	–	–	–	(2)	281
Own shares sold in the period		–	–	–	154	–	(17)	137
Dividends paid	6	–	–	–	–	–	(7,328)	(7,328)
Capital contribution for share-based payments	3	–	–	893	–	–	–	893
Share-based payments		–	–	–	–	(6)	–	(6)
At 1 January 2017 (restated)	10	**7,778**	**27,854**	**33,249**	**(3,622)**	**2,387**	**21,695**	**89,341**
Loss for the financial year		–	–	–	–	–	(1,067)	(1,067)
Total comprehensive income for the period		–	–	–	–	–	(1,067)	(1,067)
New shares issued		55	1,463	–	–	–	–	1,518
Dividends paid	6	–	–	–	–	–	(7,728)	(7,728)
Deferred tax on share-based payment transactions		–	–	–	–	–	(6)	(6)
Capital contribution for shared based payments	3	–	–	1,920	–	–	–	1,920
Share-based payments		–	–	–	–	827	–	827
At 31 December 2017		**7,833**	**29,317**	**35,169**	**(3,622)**	**3,214**	**12,894**	**84,805**

The share premium account and other reserves are non-distributable.

Other reserves represent the profit from the sale of a subsidiary, the non-distributable portion of the dividend received in Xaar plc from Xaar Digital Limited and the capital contribution to investments relating to share-based payments.

The share-based payment reserve represents the cumulative charge made under IFRS 2 in relation to share options and LTIP awards.

Full details of share capital, share premium and own shares are given in notes 25, 26 and 27 to the consolidated financial statements.

Notes to the Company financial statements for the year ended 31 December 2017

1. Significant accounting policies

Basis of accounting

The separate financial statements of the Company are presented as required by the Companies Act 2006 and in accordance with FRS 101 (Financial Reporting Standard 101) 'Reduced Disclosure Framework' as issued by the Financial Reporting Council. The results of Xaar plc are included in the consolidated financial statements of Xaar plc.

As permitted by FRS 101, the Company has taken advantage of the disclosure exemptions available under that standard in relation to share-based payments, financial instruments, capital management, presentation of comparative information in respect of certain assets, presentation of a cash flow statement and certain related party transactions.

Where required, equivalent disclosures are given in the consolidated financial statements of Xaar plc.

The financial statements have been prepared under the historical cost convention.

The principal accounting policies adopted are the same as those set out in note 3 of the consolidated financial statements except as noted below. They have all been applied consistently throughout the year and the preceding year.

Investments

Fixed asset investments in subsidiaries are shown at cost less provision for impairment and capital related to share-based payments. Contributions in respect of share-based payments are recognised in line with the policy set out in note 8.

For investments in subsidiaries acquired for consideration, including the issue of shares qualifying for merger relief, cost is measured by reference to the nominal value only of the shares issued. Any premium is ignored.

Bonds with fixed or determinable payments and fixed maturity dates that the Group has the positive intent and ability to hold to maturity are classified as held-to-maturity investments and are measured at amortised cost using the effective interest method less any impairment.

Dividends

Dividend income is recognised when an irrevocable right to receive payment has been established provided that it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably.

2. Profit for the year

As permitted by section 408 of the Companies Act 2006, the Company has elected not to present its own profit and loss account for the year.

The average number of employees throughout 2017 was 52 (2016: 55). Staff costs amounted to £2.8 million (2016: £2.8 million). Information about the remuneration of Directors is provided in the audited part of the Directors' Remuneration report on page 60. For the remuneration of key management personnel of the Company see note 34 of the consolidated financial statements.

The audit fee for the audit of the Company's financial statements in 2017 was £22,000 (2016: £22,000).

3. Fixed and current asset investments

	2017 £'000	2016 £'000 (Restated)
Subsidiary undertakings		
At beginning of the year	**23,547**	11,468
Additions in the year	**6**	11,186
Capital contributions arising from share-based payments	**1,920**	893
At end of the year	**25,473**	23,547
Held-to-maturity investments		
At beginning and end of the year	**1,000**	1,000
Disposals during the year	**(1,000)**	–
At end of year	**–**	1,000

3. Fixed and current asset investments continued

The Directors believe that the carrying value of the investments is supported by their underlying net assets.

Held-to-maturity investments represented investment in bonds returning interest at 3% per annum, which were due to mature on 22 November 2018. The option to redeem the bonds was exercised on 21 November 2017.

4. Debtors

	2017 £'000	2016 £'000
Amounts receivable within one year		
Amounts owed by Group undertakings	**61,731**	87,012
Prepayments and accrued income	**2**	14
	61,733	87,026
Amounts receivable after more than one year		
Deferred tax asset	**135**	139
	61,868	87,165

Amounts owed by Group undertakings are trading balances under normal commercial terms and interest is not charged.

The Finance (No 2) Act 2015, provided for a reduction in the main rate of corporation tax from 20% to 19% effective from 1 April 2017, and a reduction to 18% effective from 1 April 2020. Finance Act 2016 provides for a further reduction in the main rate of corporation tax to 17% effective from 1 April 2020. These rate reductions have been reflected in the calculation of deferred tax at the balance sheet date.

The deferred tax asset relates to amounts recognised in respect of share-based payments.

5. Creditors

	2017 £'000	2016 £'000
Amounts falling due within one year		
Amounts owed to Group undertakings	**11,293**	33,472
Accruals	**566**	318
	11,859	33,790

Amounts owed to Group undertakings are trading balances under normal commercial terms and interest is not charged.

For additional disclosures relating to financial liabilities, see note 23 to the consolidated financial statements.

Notes to the Company financial statements continued
for the year ended 31 December 2017

6. Dividends

	2017 £'000	2016 £'000
Amounts recognised as distributions to equity holders in the period:		
Final dividend for the year ended 31 December 2016 of 6.7p (2015: 6.3p) per share	**5,126**	4,808
Interim dividend for the year ended 31 December 2017 of 3.4p (2016: 3.3p) per share	**2,602**	2,520
Total distributions to equity holders in the period	**7,728**	7,328
Proposed final dividend for the year ended 31 December 2017 of 6.8p (2016: 6.7p) per share	**5,326**	5,212

The proposed final dividend is subject to approval by shareholders at the AGM and has not been included as a liability in these financial statements.

7. Share capital and share premium account

Full details of movements in share capital and the share option schemes, and share premium are given in notes 25 and 26 to the consolidated financial statements.

8. Share-based payments

Equity-settled share option scheme

The Company's share option schemes are open to all employees of the Company. Options are exercisable at a price equal to the average quoted market price of the Company's shares on the date of grant. The vesting period is three years. The vesting criteria of these options are disclosed in note 32 to the consolidated Financial Statements. If the options remain unexercised after a period of ten years from the date of grant, 42 months in the case of the Share Save Scheme, or five years in the case of the Share Incentive Plan, the options expire. Save as permitted in the share option scheme rules, options lapse on an employee leaving the Company.

The weighted average share price at the date of exercise for share options exercised during the period was £3.94 (2016: £4.62). The options outstanding at 31 December 2017 had a weighted average remaining contractual life of three years (2016: five years), and a range of exercise prices between 0 pence and 417 pence (2016: 0 pence and 616 pence).

The performance conditions relating to the above share options and the exercise prices of options outstanding at the year-end are given in note 32 to the consolidated financial statements.

Long Term Incentive Plan

The Company's Long Term Incentive Plan is open to all employees of the Company. Vesting of Performance Share Awards made under this scheme is conditional upon the achievement of performance conditions. Full details of the performance conditions are shown in note 32 of the consolidated Financial Statements. All awards made under this scheme are exercisable within three to ten years after the date of grant. Save as permitted in the Long Term Incentive Plan rules, awards lapse on an employee leaving the Company.

The weighted average share price at the date of exercise for awards exercised during the period was £3.60 (2016: no exercises). The awards outstanding at 31 December 2017 had a weighted average remaining contractual life of nine years (2016: eight years). All awards have a £nil exercise price.

9. Subsidiary undertakings

The following entities are wholly-owned subsidiary undertakings of the Company:

Name	Country of incorporation	Address of registered office	Principal activity	Issued and fully paid up share capital	Proportion of ordinary share capital held by the company
Xaar Technology Limited	England & Wales	Science Park, Cambridge, CB4 0XR	Research and development	4,445,322 ordinary £1 shares	100%
XaarJet Limited	England & Wales	Science Park, Cambridge, CB4 0XR	Manufacturing, research and development and sales and marketing	2 ordinary £1 shares	100%
XaarJet (Overseas) Limited	England & Wales	Science Park, Cambridge, CB4 0XR	Sales and marketing	1 ordinary £1 share	100%
Xaar Trustee Limited[1]	England & Wales	Science Park, Cambridge, CB4 0XR	Trustee	2 ordinary £1 shares	100%
Xaar Digital Limited	England & Wales	Science Park, Cambridge, CB4 0XR	Treasury	100 ordinary £1 shares	100%
Xaar ApS	Denmark	c/o Bygning OBV 028, Otto Busses Vej 5 A,1. sal., 2450 Kobenhavn SV, Denmark	Research and development	500 ordinary shares of DKK 100 each	100%
Xaar Group AB	Sweden	Science Park, Cambridge, CB4 0XR	Holding company	1,137,000 ordinary shares of SEK 0.09 each	100%
XaarJet AB[2]	Sweden	Science Park, Cambridge, CB4 0XR	Manufacturing	1,000 ordinary shares of SEK 100 each	100%
Xaar US Holdings Inc.	USA	1209 Orange Street, Wilmington, New Castle County, Delaware, USA	Holding company	6,000 shares of common stock US$1 each	100%
Engineered Printing Solutions[3]	USA	201 Tennis Way, East Dorset, VT 05253, USA	Manufacturing, sales and marketing	100 shares of common stock US$1 each	100%
Xaar Americas Inc.[3]	USA	1000 Post and Paddock, Suite 405, Grand Prairie, TX 75050, USA	Sales and marketing	10,000 shares of common stock US$1 each	100%

1 Xaar Trustee Limited shares are held by Xaar Technology Limited.
2 XaarJet AB shares are held by Xaar Group AB.
3 Xaar Americas Inc. and Engineered Printing Solutions are held by Xaar US Holdings Inc.

10. Restatement of prior periods

The financial statements include a prior period restatement in relation to the recognition of the capital contribution made due to Xaar plc's obligation to settle share-based transactions with subsidiary employees with its own equity instruments. The capital contribution has been measured in accordance with IFRS 2 and the requirements applicable to equity-settled share-based payments.

The following table summarises the impact of the prior period restatement on the financial statements of the Company:

Company balance sheet

	31 December 2016 as previously stated £'000	31 December 2016 adjustment £'000	31 December 2016 restated £'000
Fixed assets			
Investments	**15,631**	7,916	23,547
Capital and reserves			
Other reserves	**25,333**	7,916*	33,249

* Split between £7,023,000 impacting brought forward reserves as at 1 January 2016 and £893,000 impacting the other reserves in the 2016 comparative period.

Five year record

	2017 £'000	2016 £'000	2015 £'000	2014 £'000	2013 £'000
Summarised consolidated results					
Results					
Revenue	**100,142**	96,178	93,472	109,150	137,128
Gross profit	**47,045**	44,667	44,690	48,602	74,014
Adjusted profit before tax	**18,012**	19,482	20,819	24,610	41,118
Adjusted profit after tax	**16,413**	16,587	19,024	20,229	33,102
Adjusted diluted earnings per share	**20.7p**	21.2p	24.5p	26.4p	43.2p
Adjusted basic earnings per share excluding the impact of IAS 38	**15.6p**	11.0p	17.0p	17.2p	44.9p
Dividends pence per share	**10.2p**	10.0p	9.45p	9.0p	8.0p
Assets employed					
Net cash*	**44,697**	49,321	69,747	46,963	53,485

* Net cash is made up of cash and cash equivalents, treasury deposits less borrowings.

For 2013 only, adjusted revenue and adjusted gross profit were £134,134,000 and £71,020,000 respectively.

Notice of the Annual General Meeting

Notice is hereby given that the twenty-first Annual General Meeting ('AGM') of Xaar plc (the 'Company') will be held at Future Business Centre Cambridge, King's Hedges Road, Cambridge, CB4 2HY on Tuesday 22 May 2018 at 9:30am for the following purposes:

Ordinary business

To consider and, if thought fit, pass the following resolutions which will be proposed as Ordinary Resolutions:

1. To receive the Company's annual financial statements for the financial year ended 31 December 2017.
2. To reappoint Deloitte LLP as auditor to hold office from the conclusion of this meeting until the conclusion of the next general meeting of the Company at which Financial Statements are laid.
3. To authorise the Directors to determine the remuneration of the auditors.
4. To declare a final dividend for the financial year ended 31 December 2017 of 6.8p per ordinary share.
5. To re-elect Doug Edwards as a Director.
6. To re-elect Andrew Herbert as a Director.
7. To re-elect Lily Liu as a Director.
8. To re-elect Chris Morgan as a Director.
9. To re-elect Margaret Rice-Jones as a Director.
10. To re-elect Robin Williams as a Director.
11. To approve the Directors' Remuneration report (excluding the Directors' remuneration policy which is set out on pages 70 to 79 of the Annual Report) for the year ended 31 December 2017.

Special business

To consider and, if thought fit, pass the following resolutions which will be proposed in the case of Resolution 13 as an Ordinary Resolution and in the case of Resolutions 12 and 14 as Special Resolutions:

12. That the Company be generally and unconditionally authorised for the purposes of section 701 of the Companies Act 2006 (the 'Act') to make one or more market purchases (within the meaning of section 693(4) of the Act) of ordinary shares of 10p in the capital of the Company (ordinary shares) provided that:
    - the maximum aggregate number of ordinary shares authorised to be purchased is 11,671,065 (representing 14.9% of the issued ordinary share capital);
    - the minimum price (excluding expenses) which may be paid for an ordinary share is the par value of the shares;
    - the maximum price (excluding expenses) which may be paid for an ordinary share is an amount equal to the higher of (i) 105% of the average of the middle market quotations for an ordinary share as derived from the London Stock Exchange Daily Official List for the five business days immediately preceding the day on which that ordinary share is purchased, and (ii) the amount stipulated by article 5(1) of the Buy-back and Stabilisation Regulation 2003;
    - this authority shall expire at the conclusion of the next Annual General Meeting of the Company, or, if earlier, at the close of business on the date which is 15 months after the passing of this resolution unless renewed, revoked or varied before that time; and
    - the Company may make a contract to purchase ordinary shares under this authority before the expiry of the authority which will or may be executed wholly or partly after the expiry of the authority, and may make a purchase of ordinary shares in pursuance of any such contract.
13. That, in substitution for all existing authorities including the authority conferred on the Directors by Article 4(b) of the Company's Articles of Association, in accordance with section 551 of the Act the Directors be and they are generally and unconditionally authorised to exercise all powers of the Company to allot equity securities (within the meaning of section 560 of the Act), or grant rights to subscribe for, or convert any security into, shares in the Company:
    (a) up to an aggregate nominal amount of £5,221,953.00 (such amount to be reduced by the nominal amount of any equity securities allotted pursuant to the authority in Resolution 13(b)) in connection with a rights issue (as defined in the Listing Rules issued by the Financial Conduct Authority pursuant to Part VI of the Financial Services and Markets Act 2000), to holders of equity securities, in proportion to their respective entitlements to such equity securities, but subject to such exclusions or other arrangements as the Directors may deem necessary or expedient in relation to treasury shares, fractional entitlements, record dates, legal or practical problems in or under the laws of any territory or the requirements of any regulatory body or stock exchange; and
    (b) otherwise up to an aggregate nominal amount of £2,610,976.60 (such amount to be reduced by the nominal amount of any equity securities allotted pursuant to the authority in Resolution 13(a)),

    provided that this authority shall expire at the conclusion of the next Annual General Meeting of the Company, or, if earlier, at the close of business on the date which is 15 months after the passing of this resolution, save that the Company may before such expiry make an offer or agreement which would or might require equity securities to be allotted after such expiry and the Directors may allot such equity securities in pursuance of such an offer or agreement as if the authority conferred by this resolution had not expired.

Notice of the Annual General Meeting continued

Special business continued

14. Subject to the passing of Resolution 13 of the notice of meeting, that, in substitution for all existing authorities, including the authority conferred on the Directors by Article 4(c) of the Company's Articles of Association:
    (a) the Directors be and they are empowered pursuant to section 570 of the Act to allot equity securities pursuant to the authority conferred by Resolution 13(a) as if section 561 of the Act did not apply to any such allotment, provided that this authority shall be limited to the allotment of equity securities in connection with a rights issue (as defined in the Listing Rules issued by the Financial Conduct Authority pursuant to Part VI of the Financial Services and Markets Act 2000) but subject to such exclusions or other arrangements as the Directors may deem necessary or expedient in relation to treasury shares, fractional entitlements, record dates, legal or practical problems in or under the laws of any territory or the requirements of any regulatory body or stock exchange; and
    (b) the Directors be and they are empowered pursuant to section 570 of the Act to allot equity securities for cash pursuant to the authority conferred by Resolution 13(b) as if section 561 of the Act did not apply to any such allotment, provided that this authority shall be limited to the allotment of equity securities (otherwise than in connection with any rights issue (as defined in the Listing Rules issued by the Financial Conduct Authority pursuant to Part VI of the Financial Services and Markets Act 2000)):
    (i) up to an aggregate nominal value of up to £391,646.40 (being the nominal value of approximately 5% of the issued share capital of the Company); and
    (ii) up to a further maximum aggregate nominal value of £391,646.40 (being the nominal value of 5% of the issued share capital of the Company) provided that it is used only in connection with an acquisition or a specified capital investment,

    provided that this authority shall expire at the conclusion of the next Annual General Meeting of the Company, or, if earlier, at the close of business on the date which is 15 months from the passing of this resolution, save that the Company may before such expiry make an offer or agreement which would or might require equity securities to be allotted after such expiry and the Directors may allot equity securities in pursuance of such an offer or agreement as if the authority conferred by this resolution had not expired.

By order of the Board

Lily Liu
Company Secretary

21 March 2018

Notes

1. A member entitled to attend and vote at the meeting is also entitled to appoint one or more proxies to attend and, on a show of hands or on a poll, vote instead of him. Where more than one proxy is appointed, each proxy must be appointed to exercise the rights attached to a different share or shares held by the appointing shareholder. The proxy need not be a member of the Company.
2. To be effective, the instrument appointing a proxy and any authority under which it is executed (or a notarially certified copy of such authority) must be deposited at the office of the Company's registrars not less than 48 hours before the time for holding the meeting or adjourned meeting. A form of proxy is enclosed with this notice. Completion and return of the form of proxy will not preclude ordinary shareholders from attending and voting in person.
3. Any person to whom this notice is sent who is a person nominated under section 146 of the Companies Act 2006 to enjoy information rights (a 'Nominated Person') may, under an agreement between him/her and the shareholder by whom he/she was nominated, have a right to be appointed (or to have someone else appointed) as a proxy for the Annual General Meeting. If a Nominated Person has no such proxy appointment right or does not wish to exercise it, he/she may, under any such agreement, have a right to give instructions to the shareholder as to the exercise of voting rights.
4. The statement of the rights of shareholders in relation to the appointment of proxies in paragraphs 1 and 2 above does not apply to Nominated Persons. The rights described in these paragraphs can only be exercised by shareholders of the Company.
5. In accordance with Regulation 41 of the Uncertified Securities Regulations 2001, the Company specifies that only those members entered on the register of members of the Company as at close of business on 18 May 2018 (or in the event the meeting is adjourned, on the register of members 48 hours before the time of any adjourned meeting) shall be entitled to attend or vote at the meeting in respect of the number of shares registered in their name at that time. Changes to entries on the register of members after close of business on 18 May 2018 (or in the event the meeting is adjourned, on the register of members less than 48 hours before the time of any adjourned meeting) shall be disregarded in determining the rights of any person to attend or vote at the meeting.
6. Copies of Directors' service agreements, the terms of appointment of Non-Executive Directors, the register of Directors' interests kept by the Company under section 808 of the Companies Act 2006, the Xaar plc 2004 Share Option Plan, the Xaar plc 2007 Share Save Plan, Xaar plc 2007 Long Term Incentive Plan, the Xaar Share Incentive Plan and the Xaar 2017 Long Term Incentive Plan will be available 15 minutes prior to the commencement of the meeting and will remain open and accessible during the continuance of the meeting to any person attending the meeting.
7. Biographical details of all Directors offering themselves for re-appointment are set out on pages 40 and 41 of the Annual Report and Accounts.
8. Shareholders should note that it is possible that, pursuant to requests made by shareholders of the Company under section 527 of the Companies Act 2006, the Company may be required to publish on a website a statement setting out any matter relating to: (i) the audit of the Company's accounts (including the auditor's report and the conduct of the audit) that are to be laid before the Annual General Meeting; or (ii) any circumstance connected with an auditor of the Company ceasing to hold office since the previous meeting at which annual accounts and reports were laid in accordance with section 437 of the Companies Act 2006. The Company may not require the shareholders requesting any such website publication to pay its expenses in complying with sections 527 or 528 of the Companies Act 2006. Where the Company is required to place a statement on a website under section 527 of the Companies Act 2006, it must forward the statement to the Company's auditor not later than the time when it makes the statement available on the website. The business which may be dealt with at the Annual General Meeting includes any statement that the Company has been required under section 527 of the Companies Act 2006 to publish on a website.
9. In order to facilitate voting by corporate representatives at the meeting, arrangements will be put in place at the meeting so that: (i) if a corporate shareholder has appointed the Chairman of the meeting as its corporate representative to vote on a poll in accordance with the directions of all of the other corporate representatives for that shareholder at the meeting, then on a poll those corporate representatives will give voting directions to the Chairman and the Chairman will vote (or withhold a vote) as corporate representative in accordance with those directions; and (ii) if more than one corporate representative for the same corporate shareholder attends the meeting but the corporate shareholder has not appointed the Chairman of the meeting as its corporate representative, a designated corporate representative will be nominated, from those corporate representatives who attend, who will vote on a poll and the other corporate representatives will give voting directions to that designated corporate representative. Corporate shareholders are referred to in the guidance issued by the Institute of Chartered Secretaries and Administrators on proxies and corporate representatives (www.icsa.org.uk) for further details of this procedure. The guidance includes a sample form of appointment letter if the Chairman is being appointed as described in (i) above.
10. CREST members who wish to appoint a proxy or proxies through the CREST electronic proxy appointment service may do so by using the procedures described in the CREST Manual. CREST Personal Members or other CREST sponsored members, and those CREST members who have appointed a service provider(s), should refer to their CREST sponsor or voting service provider(s), who will be able to take the appropriate action on their behalf.

Notice of the Annual General Meeting continued

Notes continued

11. In order for a proxy appointment or instruction made using the CREST service to be valid, the appropriate CREST message (a 'CREST Proxy Instruction') must be properly authenticated in accordance with CRESTCo's specifications, and must contain the information required for such instruction, as described in the CREST Manual. The message, regardless of whether it constitutes the appointment of a proxy or is an amendment to the instruction given to a previously appointed proxy must, in order to be valid, be transmitted so as to be received by the issuer's agent (ID RA10) by 9:30 am on 20 May 2018. For this purpose, the time of receipt will be taken to be the time (as determined by the timestamp applied to the message by the CREST Application Host) from which the issuer's agent is able to retrieve the message by enquiry to CREST in the manner prescribed by CREST. After this time any change of instructions to proxies appointed through CREST should be communicated to the appointee through other means.
12. CREST members and, where applicable, their CREST sponsors, or voting service providers should note that CRESTCo does not make available special procedures in CREST for any particular message. Normal system timings and limitations will, therefore, apply in relation to the input of CREST Proxy Instructions. It is the responsibility of the CREST member concerned to take (or, if the CREST member is a CREST personal member, or sponsored member, or has appointed a voting service provider, to procure that his CREST sponsor or voting service provider(s) take(s)) such action as shall be necessary to ensure that a message is transmitted by means of the CREST system by any particular time. In this connection, CREST members and, where applicable, their CREST sponsors or voting system providers are referred, in particular, to those sections of the CREST Manual concerning practical limitations of the CREST system and timings.
13. The Company may treat as invalid a CREST Proxy Instruction in the circumstances set out in Regulation 35(5)(a) of the Uncertificated Securities Regulations 2001.
14. As at 7.00am on 21 March 2018 (the date of publication of this Notice), the Company's issued share capital comprised 78,329,296 ordinary shares of 10p each. Each ordinary share carries the right to one vote at a general meeting of the Company, except for the shares held in trust for the Xaar Share Incentive Plan totalling 141,838 shares and, therefore, the total number of voting rights in the Company as at 7.00am on 21 March 2018 is 78,187,458.
15. Any member attending the meeting has the right to ask questions. The Company must answer any such question relating to the business being dealt with at the meeting but no such answer need be given if: (a) to do so would interfere unduly with the preparation for the meeting or involve the disclosure of confidential information; (b) the answer has already been given on a website in the form of an answer to a question; or (c) it is undesirable in the interests of the Company or the good order of the meeting that the question be answered.
16. A copy of this Notice, and other information required by section 311A of the Companies Act 2006, can be found at www.xaar.com.

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