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 m²
13.1bn m²

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 m²
7.8bn m²

Global production lines #
1,600

Advanced Manufacturing (functional fluids)

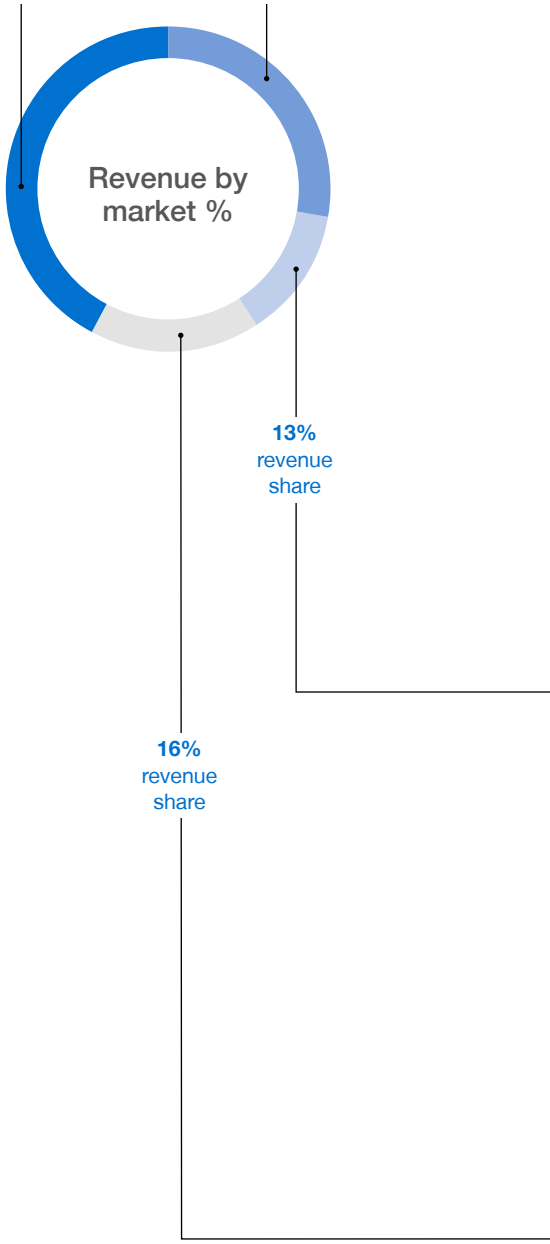
Xaar's focus is on functional fluid jetting because our inkjet technology offers an unrivalled method of non-contact, fluid deposition with incredible precision and control. Typically applications are challenging, pushing our technology to and beyond known limits in markets such as Flat Panel Display, 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.

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%

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.

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%

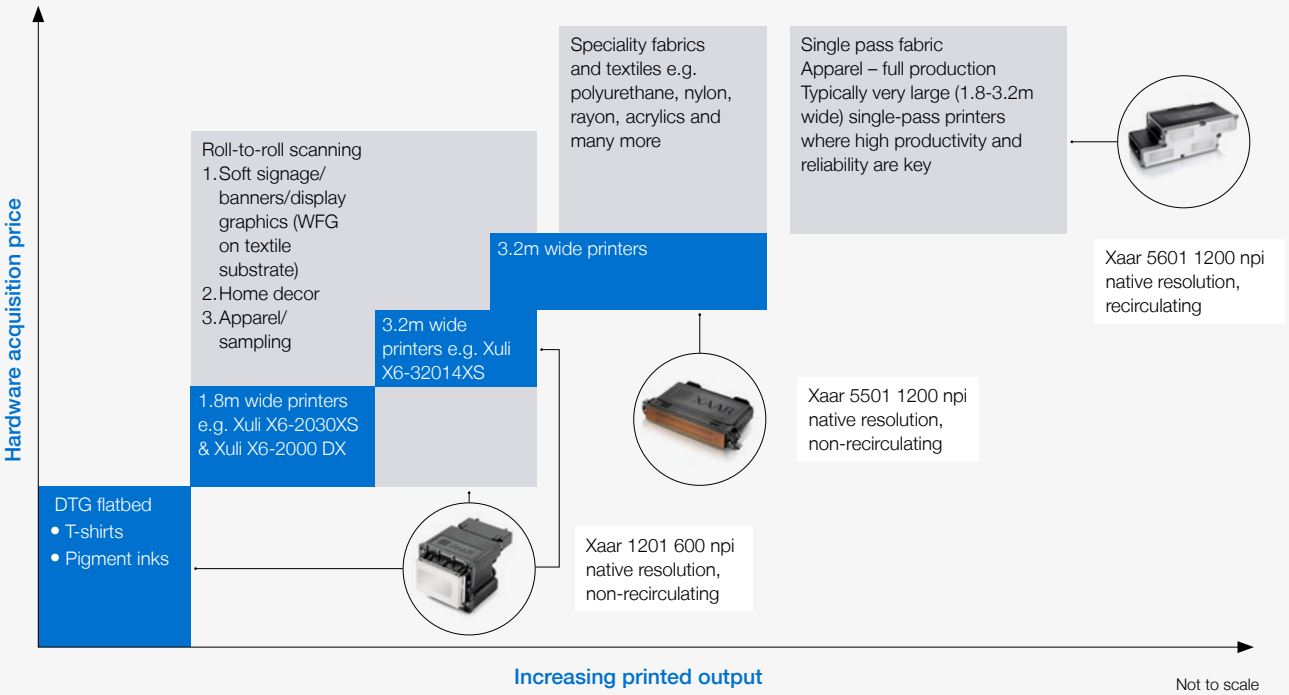
Read about Textiles in detail overleaf ›

Our market environment continued

FOCUS ON TEXTILES

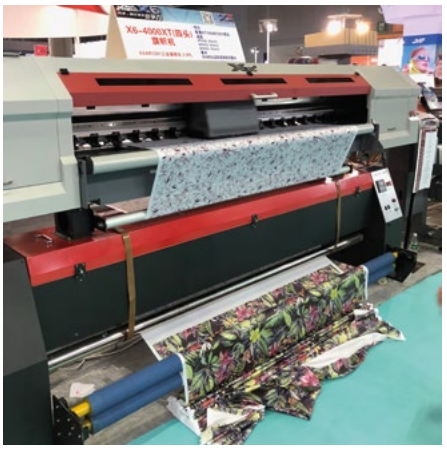
Xaar's printhead portfolio for Textiles addresses a significant portion of the sector: Low throughput requirements such as printing DTG, printing textile samples, printing speciality fabrics (polyurethane, nylon, rayon, acrylics and many more); and full production printing in a single-pass.

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-360º printer, its first serially produced digital printer, in September 2017. The XD-360º 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.