

Business model and strategy

Xaar's business is focused on inkjet technology, which together with our partners and customers, we have been transforming for over 30 years.

Xaar plc is structured into business units: Xaar Printhead, the largest BU, focuses on printhead technology; our other three business units concentrate on fluid management systems, product print systems and digital imaging.

Our printhead business sells our inkjet technology in component form (the printhead, branded Xaar) to OEMs who produce and sell the complete digital printing solution. We also work with User Developer Integrators (UDIs) who are building their own digital system. We work collaboratively with leading fluid manufacturers to fully optimise the fluids beyond a lab setting to ensure optimum print performance in real world applications. We also sell Xaar branded fluids to UDIs (manufactured by our ink partners) which helps to build a long-term relationship with our customers. In addition, we actively partner with hardware and software integrators as well as substrate suppliers to deliver a robust and attractive total solution to our customers.

In March 2022 we completed the acquisition of Megnajet, market leader in the design and manufacture of industrial fluid management systems for digital inkjet. The company provides robust, reliable, easy to integrate products which are sold to a range of OEMs in USA, Europe and Asia. Our digital imaging company, FFEI Ltd, manufactures high performance digital imaging solutions – from digital inkjet label presses to digital pathology scanners. Its inkjet products (print engines) use Xaar printheads. Our product printing business, EPS, designs and develops complete industrial printing machines which are sold to end users.

Our business model

Xaar designs



We have R&D facilities in Cambridge and Stockholm (printhead business), and Hemel Hempstead (print systems) and Vermont (EPS).

We invest a substantial proportion of our product revenue in R&D to remain a world leader in inkjet technology (2022: approximately 12%).

We continually add to our Intellectual Property (IP) portfolio, and currently, across the Xaar Group, we have around 355 patents and patent applications. Our R&D staff totals 85 which is approx. 20% of the total workforce (at the end of 2022).

Xaar manufactures



Xaar manufactures its printheads in Huntingdon, UK. Xaar's manufacturing is capital intensive.

The Group has invested over £70 million in assets and production facilities in Cambridgeshire, UK since the plant opened in 2007.

EPS, our product printing business, manufactures customised and bespoke printing solutions in Vermont, USA.

FFEI, our digital imaging business, manufactures imaging solutions in Hertfordshire, UK. Megnajet manufactures supply systems in Northamptonshire, UK.

Xaar markets



Xaar offers a wide range of industrial inkjet printheads and print systems which are designed and produced to meet the customer-driven requirements for a range of manufacturing applications.

Primary markets include:

- 3D Printing
- Ceramic Tile Decoration
- Coding & Marking
- Decorative Laminates
- Direct-to-Shape
- Functional Fluid Deposition
- Glass Printing
- Graphics
- Primary Labels
- Packaging
- Product Printing
- Textiles.

Xaar sells



Xaar's printhead business sells direct to OEMs and UDIs around the world through its global sales team. Xaar's highly skilled application engineers offer technical support to assist OEMs and UDIs in the successful design, build, commissioning, and ongoing maintenance of printing systems.

We export over 95% of our printheads to customers around the world, within the Europe, Asia and North America regions.

Xaar company EPS sells product printing equipment, services and consumables. The majority of sales are to US customers.

FFEI sells via three routes to market: as a full system to one OEM, as a ready to integrate print engine via distribution, and as a Xaar branded print engine for our UDI customers. Megnajet sells its products directly to customers and via Xaar.

We create value for all our stakeholders

Customers

OEMs, User Developer Integrators and end users are able to innovate in their manufacturing methods and their products as well as benefit from a shorter distribution chain; they can take products to market more quickly, implement more precise and efficient processes, easily produce short batches, improve productivity, reduce waste and deliver more creativity.

Shareholders

A key goal at Xaar is to maximise the long-term growth in value delivered to shareholders via sustained, consistent 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.

Our employees

Our success depends on the skills, capability and engagement of our people. We want to create an environment where everyone can come to work and share our values and passion for developing and manufacturing world leading technology.

We are building a culture where our employees are passionate about what they do, and where integrity, innovation, creativity and collaboration are a way of life. To foster this, we have a cross-functional project team which is committed to embedding our values throughout the whole Group, looking at ways to highlight our EPIICC values awards and driving the Company-wide acknowledgement of the nominated employees. During 2022 we had 572 nominations across the Group for our values awards.

To build up team collaboration and provide an opportunity for employees to socialise away from their desks, we regularly provide a coffee van or lunch. In addition, we have continued with forums where employees have the opportunity to meet and chat with all our Non-Executive Directors along with the Exec Xchange where our employees get to meet members of the senior management team in smaller groups to ask questions and exchange ideas.

We like to build long-term relationships with all our employees by helping them grow and develop and by making Xaar businesses interesting places to work as well as great companies to be involved with. Internal promotions are an important part of this, and in 2022 we promoted over 32 people.

Environment

Digital print methods are inherently more environmentally friendly than the analogue techniques we seek to replace. Our research shows that, compared to analogue alternatives, digital has a huge impact in reducing energy consumption (by up to 55%), water consumption (by up to 60%) and CO₂ 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'. Environmental best practice and our investment in sustainable manufacturing and operational efficiencies remain key areas of business focus.

Our Sustainability Roadmap, launched in our 2021 Annual Report, continues to drive and shape all business decisions via the ESG Committee. The Roadmap has four key pillars – Environmental, People, Innovation and Community; its purpose is to drive our ESG goals beyond the energy reduction scope to a Group-wide activity. We continue our focus on moving to solar energy. One more of our buildings in Huntingdon will be switched over to green energy in January H1 2023, and our Megnajat facility in Northamptonshire will move over to green energy in September 2023 once the current contract expires. Whilst we have more work to do, over 99% of our UK consumption is already green. We completed the installation of our planned EV infrastructure, with ten new 22 kW chargers installed across the Huntingdon and Waterbeach facilities, joining the 27 kW chargers that were already in place at FFEI. We are planning to undertake a major energy reduction project through January and February 2023 leading to an expected 40% reduction in electrical energy consumed in the Huntingdon manufacturing facility from the end of Q1 2023. This includes the installation of LED lighting. Planning for solar installation continues for the Huntingdon factory and our goal is for installation to start end of Q3 2023, assuming successful contractual discussions.

Digital printing compared to analogue reduces consumption by up to:

CO₂ emissions

95%

Energy consumption

55%

Water consumption

60%

Source: Xaar.