

Market overview

Seeking new opportunities

Most things we come into contact with on a daily basis are patterned, decorated, printed or finished in some way. In fact, even after excluding printing in the office or the home, over 3 trillion m² of material is printed, patterned, decorated or finished each year – that's a monthly output equivalent to the surface area of the United Kingdom.

These items can be broadly split into four areas: products, packaging, promotion and publishing. Products include things like ceramic tiles and laminate flooring. Packaging includes labels on bottles and bar codes on boxes. Promotion includes advertising banners and posters. Publishing includes books and newspapers.

Perhaps surprisingly around 97% of production processes used in the manufacture of these items still use traditional analogue technology. Analogue (sometimes referred to as 'fixed image') solutions can be very effective when the same image is replicated many, many times. However, where frequent changes are required or run lengths are shorter, then digital (also known as 'variable image') processes can provide significant cost and inventory reductions whilst improving time-to-market versus analogue techniques.

Over the last 20 years digital imaging technologies, including digital inkjet, have emerged for applying images, patterns or finishes in more efficient, flexible and cost-effective ways. Because of its ability to work with a variety of jetting fluids and substrates, and in difficult environments, inkjet has the unique ability to potentially replace all current printing techniques.

The pace of inkjet's adoption and the rate it displaces existing technologies is driven by some key factors, including cost, speed and image quality, which must be met in order for the adoption to take place. Because of these characteristics the adoption of inkjet has typically occurred through 'waves of conversion' in distinct market segments, as the developing technology meets the individual conversion requirements of particular applications.

Xaar, a world leader in industrial inkjet, has successfully developed digital technology and manufactured and sold inkjet products, predominantly printheads, into a number of sectors. The printhead is the heart of the digital process, depositing fluids, including inks and coatings, in precisely the right quantity and in the right place on the substrate, without even touching the surface.

To date Xaar has driven, and benefited from, 'waves of conversion' in two particular applications: outdoor advertising (including billboards, posters and banners) and ceramic tile decoration, which have both adopted digital inkjet technology. These two applications presently use inkjet to annually produce over 7 billion m², but represent only 0.2% of the 3 trillion m² entire global print production.

Xaar's challenge is to expand its existing digital inkjet printhead technology into new markets and to develop new technology to maximise the opportunity that exists from the conversion of much larger applications to digital inkjet.

Looking forward, the opportunities for digital print continue to accelerate. Industry forecasts project the digital print market to double over the next ten years.

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3%

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New markets

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