# THE ROLE OF PAPER IN THE EVOLUTION OF DIGITAL PRINTING

## As digital machines become bigger and faster, the smooth running of paper is key. Stéphane Latouche-Hallé and Maurice van Duuren (Senior Product Application Engineers at Sappi Europe S.A.) discuss Sappi's contribution to digital and other printing methods

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The commercial, digital printing market is currently facing significant challenges. Amongst these are the growing demands for faster production and delivery, smaller and more flexible print runs and an ever-increasing variety of products.

### GROWTH IN PACKAGING

The most pronounced growth in digital printing – and potentially the most exciting – will come in packaging, where the exponential growth of e-commerce and pressure for more sustainable solutions are fuelling innovation. Digital print already meets expectations for sustainability and cost, by offering substantial savings across paper, ink, material wastage and energy usage.

As a result, the global digital-print market – already worth €125 billion – is predicted to reach €210 billion within 10 years, according to market analysts Smithers in their Future of Digital Printing to 2032 report.*

### MEETING INDUSTRY NEEDS

Collaborating with original equipment manufacturers (OEMs) and other partners in this area, Sappi is developing products for new production processes to offer flexibility, combined with lower production costs.

Superb, high-quality imagery, brilliant colour reproduction, outstanding contrast and improved readability are also among today's packaging essentials. These qualities are not only relevant in highly visual markets – such as cosmetics – but are also key to increasing the shelf impact and brand differentiation of a wide range of products.

### THE FULL PACKAGE

Alongside the growth of digital printing, offset and flexo are still important elements in the market. These applications will keep their value in situations where both customers and end users value quality as well as flexibility.

In turn, this places a premium on papers that can be used across different print applications. As Maurice van Duuren, Senior Product Application Engineer for Commercial Print and Packaging at Sappi, explains, "If it's a really big print job, a customer may choose offset because of the cost advantage. But with a small run, or one needing to be printed in different languages, they are more likely to go for digital." He continues, "Customers want to maintain the same quality and product across both processes. They don't want to have to switch to a special paper or board product that can only be used on one machine."

### FUSION TOPLINER

To ensure high productivity, papers need to have a certain bulk and stiffness. Sappi's Fusion Topliner, which can be used for digital, flexo, offset or screen printing, is a good example of a high-quality paper capable of this versatility.

Further to the above-mentioned requirements of the paper itself, there are also demands on the finishing process. These include small reel sizes, zero splices or reels on pallet that can only be delivered by sophisticated mills.

### TRANSFERRING SUSTAINABILITY

Another area in which Sappi is innovating, is digital dye-sublimation printing for textiles – something that offers cost and sustainability benefits for manufacturers in the interior design, sports, fashion, decoration and signage sectors.

According to Stéphane Latouche-Hallé, "Digital dye-sublimation supports the industry's requirements to produce more sustainably."

Although there are two steps involved in digital sublimation – printing and transferring – the colours are durably fixed directly during the process. And, because the dyes are completely anchored in the textile fibres, the fabric does not need washing after printing, thus reducing water consumption.

Thanks to high-transfer rates, with high-quality Sappi dye-sublimation papers, only the necessary amount of ink is printed, causing minimal waste. In addition, the inks used are water-based and solvent-free and, Sappi sublimation papers are 100% recyclable.

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### COLLABORATION FUELS INNOVATION

With much of the rapid progress in digital printing having its roots in hardware, inks and machinery, Sappi maintains extremely close working relationships with major OEMs and suppliers. This communication occurs through regular meetings, exchanges of ideas, sharing of research and test sessions.

"At Sappi, we believe it's really important to be involved in the whole supply chain," says Latouche-Hallé. "It's equally crucial to follow the trends and developments of OEMs and to support advances in regards to always faster printing or new technologies with our own contributions," he adds.


*The most pronounced growth in digital printing will occur in packaging*

***"We particularly appreciate the paper's very high whiteness, excellent stability and consistently high quality"***

One example of this is Sappi's 15-year partnership with Italian manufacturer ICOM. ICOM is a company boasting 50 years' experience in the production of corrugated packaging in the food, drinks, pharmaceutical and cosmetics industries.

Such teamwork has also allowed ICOM to extend its range by offering both small and large print runs of its creative packaging in offset print quality.

## ICOM SATISFACTION

As part of a drive to continuously improve efficiency, productivity and sustainability, ICOM recently invested in an HP PageWide C500 digital-printing press. The thermal, inkjet technology means that print can be applied after the board is corrugated, via a single-pass, post-print process.

Razor-sharp text and bar codes, smooth tone transitions and brilliant colour reproduction need exactly the right substrate. Paired with Sappi's super-white Fusion Topliner container board, the new press achieves exceptional image quality.

Designed for lamination onto corrugated and solid boards, the paper features front side, double-coated top liner with functional, reverse-side coating. For ICOM's owner and commercial director, Tommaso Costantini, finding the right paper has been crucial to the success of the process. He says, "We particularly appreciate the paper's very high whiteness, excellent stability and consistently high quality."

Fusion Topliner has also provided ICOM with cost savings, thanks to the 100% virgin fibre liner and its functional reverse coating which absorbs glue more evenly during lamination. This reduces glue consumption by as much as 75%.

ICOM currently uses 160gsm Fusion Topliner. However, the target is to save even more material and further boost sustainability by moving to 135gsm.

## OFFERING SUPPORT

As digital printing is such a vibrant and fast-moving market, Sappi understands how important it is to provide rapid-response support for customers and their projects.

The company provides access to technical-application engineers, who are ready and willing to share their expertise and detailed product knowledge. This includes recommending best papers and offering practical assistance.

## CONCLUSION

In a constantly evolving industry with so many parameters, from type of printer, ink and transfer mode to final application, finding the right paper or board for a particular project is always a delicate balance to strike.

Sappi's solution is to focus on innovation, partnership and the combination of high-quality products with technical expertise, to achieve the best printing outcome for every customer. ■

**Source: https://www.smithers.com/services/market-reports*

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