

Plastics in Packaging

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IN THE CLEAR

Why the no-label look is just the tip of the innovation iceberg for in-mould labelling

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Landa opportunity

Rather than hinder the growth of the digital-print packaging market, the new post-Covid-19 landscape has only served to propel it forward.
Noli Dinkovski reports

While the enforced Covid-19 lockdowns have had a devastating impact on a number of industries globally, packaging at least appears to be faring rather well.

And, according to Benny Landa (pictured above), when it comes to the digital-print packaging market, the fallout of the pandemic has actually opened up a whole new world of possibilities.

"If the Covid-19 crisis has taught us one thing, it's that the world isn't going to go back to the old normal – and the new normal will be much more digital," said the founder of Landa Digital Printing, fittingly enough during a virtual 'Landa Live' question and answer event held in September.

"There will be more online shopping, more home deliveries, and an increased need for fast turnarounds and flexible manufacturing," Landa predicted. "Our packaging customers are seeing increased demand for just-in-time printed goods."

With double-digit growth forecast for digital print for packaging even before the start of the pandemic, the societal changes brought about by Covid-19 are giving further impetus to a sector already on an upward trajectory. And with a steady stream of ever more capable technology entering the market, there's a great deal for both flexible and rigid packaging manufacturers to get excited about.

If anyone can spot an emerging trend, it's likely to be Benny Landa. Dubbed 'the father of commercial digital print' by his peers, Landa founded Indigo Digital Printing in 1977, eventually selling it to HP in 2002. To this day, HP Indigo remains the market leader in commercial digital printing.

Landa went on to set up a second Israeli-based firm, Landa Digital Printing, to develop Nanography – an evolution of digital printing that involves inkjet heads placing microscopic process colours of ink onto a blanket, which then transfers the dry image onto the substrate.

At September's event, Landa revealed that the company's W10 flexible packaging press – first demonstrated as far back as Drupa 2016 – will finally be installed at a beta-testing site in 2021.

Available in 4-8 colours, the 1,200dpi web-fed Nanographic press supports 'off-the-shelf' plastics packaging films, metal foils, paper and carton substrates, without the need for any pre-treatment or priming.

Describing digitally-printed flexible packaging as one of his company's "most strategic markets", Landa alluded to the long development phase of the W10 by suggesting it was also one of the most demanding in terms of applications. "In addition to requiring superb quality, high speed, and competitive economics, you also need to be able to print on a huge range of materials," he explained.

"You need to print on everything from very thin plastics films such as PE, PP, polyester – to metal foils, paper and cartonboard. And, of course, digital white is a must. You also have to have compatibility with the laminating materials, resistance to high temperatures for pasteurisation and sterilisation, and much more besides. The W10 now does all of that – it is an amazing, fantastic product."

Away from the hyperbole, one company taking full advantage of the growth of digitally printed flexible packaging is UK-based Baker Labels. Earlier this year, the trade label manu-

facturer added a new flexible packaging arm called BakPac.

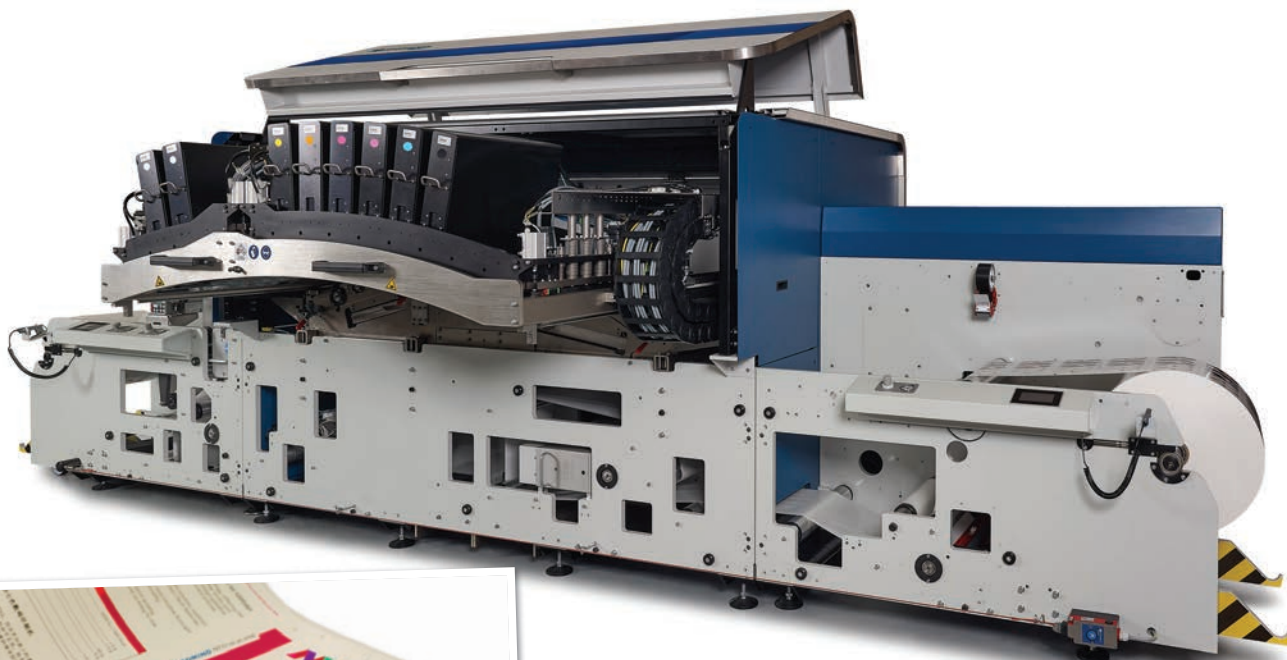
With the help of an HP Indigo 20000, BakPac manufactures stand-up pouches, pillow pouches, shrink wrap and printed film. BakPac general manager Phil Smith believes there is a huge opportunity in digitally-printed flexible packaging, particularly as the company is targeting trade customers, rather than end-users.

"Our targets are current label and commercial printers looking to expand what they can offer their customers, as well as conventional packaging manufacturers seeking to offer the short runs that they wouldn't normally be able to handle, without either the associated waste or the long lead times," he explains.

According to Smith, start-up or small batch producing companies along with brand-led promotional events that require a complex solution are BakPac's primary focus. And by using digital to help get new projects up and running, he expects the brands to move into higher-volume production and be supported by the conventional packaging industry in the future.

Over at Baker Labels, three HP Indigo 6900s run alongside and two Screen Truepress Jet L350UVs – all of which can be used for flexible packaging if required. Describing the digital label market as "very well-developed", Smith says the way to get ahead is through service and providing quick solutions to customers' needs.

"Our latest advancement with inkjet is the Jet FX, which enables us to print digital foil and spot-raised varnishes. Both of our Screen Jet presses are providing great quality and efficient production."



*Above: The N730i is Domino's most significant launch since it moved into the digital label market
Left: A label produced on the N730i, which uses a BitStar 1,200dpi piezo print head*



Smith acknowledges that with an increasing number of presses available, the labelling market is becoming ever more competitive. And, following Domino Printing Science's launch of its next-generation inkjet label printer, that market has become more crowded still.

Heralded by Domino as its most significant new product development since moving into the digital label press business, the N730i incorporates a host of new features including the Brother BitStar 1,200dpi piezo print head, the SunLight graphical user interface, and the latest automated i-Tech SetAlign and i-Tech CleanCap2.

Domino says that unlike other systems where higher printing speed is at the cost of reduced print quality or reliability, the N730i is designed to print all jobs (including those with 'silk-screen-like' white) at 70 metres per minute (m/min), with the same consistent high print quality.

At the virtual launch held at the end of September, Adrian Brown, managing director of Olympus Print Group – the UK firm tasked

with beta-testing the press – said the N730i's ability to print at 1,200dpi had enabled his business to move into different markets, and applications within those markets.

"One market that springs to mind is shrink sleeves," Brown said. "We do quite a bit of work on shrink sleeves, and we've seen already that with this droplet size we can get a better shrinkage, and the graphics are more controlled. There are also tonal advantages – skin effects on home and personal care items are effective as well."

The N730i comes hot on the heels of more innovation from Domino in the form of the Gx-Series, a new range of thermal inkjet printers it says are optimised for fast, efficient, and accurate coding on product labels, flexible films, and cartons.

Operators can select from one to four maintenance-free print heads, which can be stitched together to allow for print heights of up to 50.8mm. Alternatively, they can be used separately to print on multiple lines at speeds of up to 300m/min. Domino's AutoSwap, meanwhile, enables cartridges to be changed while printing, without interrupting production.

Domino thermal inkjet product manager Alexandros Mountis says the Gx-Series is equipped to meet the needs of an evolving global marketplace characterised by rapid changes in production schedules and fluctuations

in consumer demand. He adds that this is a trend that has become more acute with the advent of Covid-19.

"Today, more than ever, manufacturers need to be equipped to handle last-minute changes to production schedules, including quick product changeovers, to satisfy demand," he says. "By automating the coding and marking process and populating labelling templates directly from the data source, they can reduce stoppages, waiting times, general materials waste, and over-production – adding to their overall sustainability objectives."

With so much going on in flexible packaging and labelling, it can be easy to overlook the growing potential of digital printing for rigid packaging. Merav Sheffer, marketing manager at Velox – another Israeli-based firm – believes it's only a matter of time before "digital transformation" in rigid packaging becomes a reality.

"What we are witnessing with other market segments such as labels, folding cartons and flexible packaging, will also happen in the rigid packaging segment," she suggests.

Velox's core business is to develop and manufacture mass-produced digital decoration for the rigid packaging market. Its flagship press, the IDS 250, is designed for the direct-to-shape (DTS) digital printing of rigid plastics such as tubes and airless containers.

By running at 250 tubes per minute, Sheffer says that the IDS 250 can meet the volume demands of the plastics tube market, where

average run-lengths are currently in the region of 35,000-40,000 containers and getting shorter every year.

"Until recently, digital printing solutions didn't come close to the speed required and, as a result, were used only for marketing campaigns and very short batches, due to the high cost," Sheffer says. "With the Velox IDS 250, the speed issue is resolved, printing with 14 colours. The potential in the tube market itself is huge, with several dozens of billion tubes produced worldwide annually."

By removing the need for primary or secondary labels in many cases, DTS digital printing offers a lower-cost and more sustainable alternative to traditional printing, Sheffer says. "For example, a tube converter that will avoid printing 10 million self-adhesive labels and print it DTS can save up to 50 tonnes of plastics scrap."

As for the future, Sheffer predicts that the personalisation and variable-data benefits

afforded by digital printing will evolve from the "gimmicky" packaging with individual names and faces, into one where the actual products themselves are personalised.

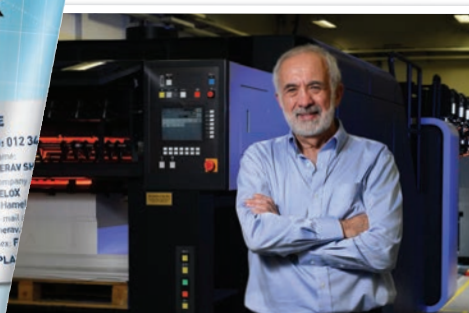
"This will also necessitate printing one-offs," she explains. "But full personalisation does not only rely on the decoration technology and the ability to print variable data easily – it's dependent on the entire packaging supply chain. Only when both the technology and supply chain are adjusted to serve such micro-markets, will such full personalisation become a reality."

he says. "Well, in the last couple of years, the world just seems to have turned upside down. Now, customers are coming to me to say why they need digital printing."

"There's a new realisation, a new awareness, about the power of mass customisation for commercial printing – and especially for packaging."

More information from:
Baker Labels/BakPac
Domino Printing Sciences
Landa Digital Printing
Velox

bakerlabels.co.uk
domino-printing.com
landanano.com
velox-digital.com



Above: Benny Landa believes in the power of mass customisation

Left: Velox says 'gimmicky' packaging will evolve

It's an evolution that's not lost on Landa, either. After years of preaching about the virtues of mass-customisation for the packaging market, he believes he is finally winning the argument.

"I've been in this industry my entire career. And for most of that time, I have been proselytising – trying to convince customers and brand owners – why they need digital printing,"

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