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### Package Print Worldwide refocuses in 2013

Over the past two years *Package Print Worldwide* has gained a respected international reputation for the quality of its editorial content and industry comment, while the *Package Print Worldwide* e-newsletter, published fortnightly, has rapidly grown a global readership of more than 22,000 printers and converters, industry suppliers, and a significant number of end users and consumer product groups.

For 2013, steps are being taken to further develop the magazine's in-depth features, build and extend the website content, and enhance the e-newsletter to further focus the coverage of industry news, technologies, market developments and restructuring taking place in this fast-paced, and increasingly global, market.

David Pitman, who has successfully developed the electronic newsletter while acting as production editor for the hard copy magazine, will now take on the role of group news editor across all the label and packaging group's magazines. Nick Coombes, who undertook the role of editor when Package Print Worldwide was launched, will continue to support the publication as consultant editor.

Package Print Worldwide continues to focus on the trend towards shorter runs of high-quality consumer facing cartons and flexible packaging, but we cannot ignore other areas of the package print market where new technology is also making an impact, including direct printing onto cans and plastic containers, preprint liners and even shorter run direct printed, consumer-oriented corrugated containers such as those pioneered by Apple.

As can be seen in this edition of *Package Print Worldwide*, digital is starting to make a significant impact in the package print market not just in terms of print technology, but also converting and finishing technologies. At the same time conventional press manufacturers and plate and sleeve systems manufacturers are shortening make-ready times and moving down in press width to meet these demands for more variation and more rapid response to changing consumer tastes.

Technological change is opening up exciting new opportunities for package print converters. Package Print Worldwide aims to be your guide in adapting to this period of rapid and often disconcerting change.



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## EU TIMBER REGULATION COMES INTO EFFECT

A Europe-wide regulation governing the trade of illegally harvested timber and timber products in the EU came into effect on March 3, with ramifications for the entire material supply chain.

Regulation (EU) No 995/2010 of the European Parliament and of the Council of October 20, 2010 lays down the obligations of operators who place timber and timber products on the market.

Also known as the (Illegal) Timber Regulation, it looks to counter the trade in illegally harvested timber and timber products through three key obligations: the prohibition of placing on the EU market, for the first time, illegally harvested timber and products derived from such timber; that EU traders who place timber products on the EU market for the first time to exercise "due diligence"; and for operators further down the supply chain, referred to as traders in the regulation, to keep records of their suppliers and customers to aid the traceability of timber products.

The regulation covers a wide range of timber products, including: pulp and paper, with the exception of bamboo-based and recovered (waste and scrap) products;

joinery products; various types of board; and wood for fuel, in logs, in billets, in twigs, in faggots or in similar forms, as well as wood in chips or particles, sawdust and wood waste and scrap, whether or not agglomerated in logs, briquettes, pellets or similar forms.

The regulation is legally binding in all 27 EU member states, which are responsible for laying down effective, proportionate and dissuasive penalties and for enforcing the regulation.

Although introduced in late 2010, the application of the regulation commenced at the beginning of March this year, and requires that due diligence is applied to all timber when it is first placed on the EU market, and that traders, further down the supply chain, keep track of who timber or timber products were bought from, and where applicable, who they were sold to.

"Traders" are defined as those, who in the course of a commercial activity, sell or buy timber or timber products already placed on the European market. An "operator" is defined as those that place timber or timber products on the EU market, either by producing it directly in the EU or by being

a trader buying timber or timber products directly from a supplier outside the EU.

Under the regulation, operators are required to conduct "due diligence", which involves providing information on the supply of timber products, including description of species, volume, country of harvest and where applicable concession of harvest, name and address of suppliers and, most importantly, evidence of compliance with applicable legislation. The system also requires risk assessment of supplies and, where high risk is identified, mitigation to eliminate any potentially illegal timber.

In order to avoid any unnecessary administrative burden, the text of the regulation states that operators already using systems or procedures which comply with the requirements of the regulation should not be required to set up new systems.

Traders, throughout the supply chain, must be able to identify the operators or traders who have supplied the timber and timber products, and, where applicable, the traders to whom they have supplied timber and timber products.

Traders shall keep the information for at least five years and shall provide that information to competent authorities if they so request.

Kathy Abusow, president and chief executive officer of the Sustainable Forestry Initiative (SFI), has welcomed the regulation, and said: 'Illegal logging undermines responsible forest governance, damages wildlife habitat, and reduces the potential for forests to provide stable supplies of products and support local communities. The EU Timber Regulation, just like the US Lacey Act, is an important regulatory tool to address illegal logging and enable legal global trade in forest products.'

The European Timber Trade Federation has carried out statistical analysis to monitor the initial impact of the regulation.

Report author Rupert Oliver, who is also director of market intelligence firm Forest Industries Intelligence, said: 'There are key questions about the potential impact of the EU Timber Regulation on the European wood trade, including whether it will make timber more or less competitive against other materials, boost demand for certified sustainable forest products, or favor alternative risk-based legality verification systems, and if it will divert wood imports to other markets with less rigorous legality enforcement systems.'

Read more from the carton market on pp. 24-25, with comment from key suppliers about the latest topics impacting the industry



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### **NEWS**



## INDIA'S GROWING CONSUMER POWER WILL DRIVE THE MARKET FOR HIGH-END QUALITY RETAIL PACKAGING

The growing power of India's consumers is helping the market for high-end packaging boom, according to senior personnel from global press control manufacturer QuadTech.

Randy Freeman, QuadTech's vicepresident and general manager of packaging, and Hemant Desai, general manager of QuadTech India, have outlined the potential they see in the Indian packaging market, particularly with the changing nature of the country's retail landscape.

QuadTech exhibited at February's Printpack India event, along with a range of other supplies to the package printing market, including Bobst India, Esko, HB Fuller India Adhesives, Kurz India and Muller Martini (India).

According to Freeman, India's high-end packaging market is enjoying fast growth because of a rising GDP, a booming younger generation, a demand for quality products, the spread of supermarket retailing and quality demands of global brand-owners. 'Thanks to a growing middle-class, demand is rising because more consumers have increased disposable income for global brands of retail products,' he said.

'Those consumers who are willing to pay for quality are becoming increasingly discerning about what they buy. The brand owner's promise to meet those expectations is expressed by the presentation on the retail shelf. A high-impact presentation is also needed because the supermarket retail experience invites the consumer to closely inspect and hold the product, and to make a choice between competing brands before reaching a buying decision.

'The purpose of packaging in these circumstances is to provide product decoration and identification, rather than just protection. This is a radical change from traditional outlets where the store owner would dispense the product.'

Desai said: 'We can expect further long-term growth in the retail and branded consumer goods sectors because of the growing middle class and incentives that promote more foreign investment. Another favorable development is the repeal of protectionist import duties and relaxing of laws prohibiting foreign ownership, thus encouraging a further inflow of finance.'

'Major consumer goods suppliers like Nestlé, Cadbury and Procter & Gamble have already enjoyed solid returns by investing in India as well,' Freeman continued. 'They have set up production plants in the country and want to deliver an identical look for their products globally. They seek local print suppliers that can guarantee the same level of sophistication and ISO-accredited quality.

'Packaging printers in India then are driven to invest in the very latest multi-process technology that can print designs with many complex colors or fine linework, perfectly and in-register. Given the need to control costs with raw material price volatility affecting margins, automated controls are vital for ensuring minimized waste and consistent quality throughout the production run, and from one job to the next. QuadTech's offering in this technology niche plays an important role in the professionalization of the print workflow.

'We have developed solutions for on-the-fly spectral color measurement, precise register control and inspection on a range of difficult films, and real-time and historical analyses of press performance.'

'Overall, therefore, the prospects of growth in the Indian packaging sector look very promising indeed,' Desai concluded.

### CARTON MARKET TO BECOME MORE IMPORTANT AS PRO CARTON

#### **CELEBRATES 25TH ANNIVERSARY**



Industry association Pro Carton is predicting the carton market will see growth today, tomorrow and in the future, as cartons "unite communication competence, convenience and sustainability".

Pro Carton celebrates its Silver Jubilee in 2013, and president Roland Rex believes that packaging made of cartonboard will be successful in the future, as it is today, due to these criteria. 'There can be no doubt that cartonboard and cartons are the most sustainable form of packaging today,' he said. 'Sustainability will remain a trump card that will become the most important factor in production in the coming years.

'Even in difficult times demand is still there. And I view the coming years positively; we have recovered from a long slump and upward trends are on the horizon.'

Rex said that cartons also benefit from being receptive to different printing and finishing technologies, as well as printed communication tools, such as QR codes.

'Cartons have the advantage of adding character to products on the shelf through numerous printing and processing options. Brand owners use the carton to actively support their products at the point of sale.

'Carton is also unbeatable in terms of communication as it is predestined as the optimal packaging carrier for interactive elements; the ideal link between the real and the virtual world. Nowhere else can you place QR codes – which are growing in leaps and bounds – so efficiently and clearly readable than on the surface of cartons.'

Rex added: 'There are a number of products promising growth. For example, the number of pre-packed meals is growing, and most of these are packed in cartons. This is where cartons truly demonstrate their convenience factor. But non-food areas such as wellness, healthcare and pharmaceuticals will also grow, and not just for elderly consumers which are also a growing target group. And last not least, cartons are the packaging of choice in the premium segment as they add prestige to a product.

'Cartons create a win-win situation for the branded goods industry, the retail trade and consumers.'

### DG PRESS MACHINES LAUNCHES NEW WEB OFFSET PRESS

DG press MachineS has launched a new web-fed offset press for package printing applications, Thallo, which has been designed by the sister company of DG press ServiceS to maximize sleeve technology in the package printing market.

Sleeve technology in offset allows printers to work with variable sizes, and allows sizes to be changed without having to completely alter the unit or cassette, said DG press MachineS, and is a recognized way of cost-effectively printing different repeat lengths.

Thallo will be initially targeted at the flexible packaging and shrink-sleeve markets, and the company's Richard Miedema said: 'Unlike commercial print products like brochures and flyers, which usually have the same print size like A4, package printing comes in many different print sizes depending on the product. It is therefore very important to be able to change print size quickly and cheaply. Drent Goebel pioneered sleeve technology, which was already being used in flexo, and brought it to offset in 2003.

'Environment is perhaps the most

important factor of offset for packaging, and global awareness is increasingly a driver worldwide. More than 90 percent of flexible packaging is printed by solvent-based applications with flexo and gravure printing presses; applications creating less than ideal environmental side effects and situations, including environmental pollution by solvents, hazardous waste, fire hazards, employee safety and energy consumption.

'Offset makes it possible to print while greatly reducing high levels of volatile organic compounds.'

The development of the Thallo includes various innovations to address the challenges and limitations that are said to have held back mainstream use of web offset by package printers.

Precise details of these innovations have not yet been announced, but a concept printing deck will be showcased at Labelexpo Europe 2013. DG press MachineS will start building the first two presses during the first quarter of 2014.

'Offset offers many advantages in terms of quality, cost per printed product and is far more environmentally friendly,' said Miedema. 'A set of offset plates is up to 20 times cheaper than photopolymer plates or gravure cylinders, but is also very simple to prepare in-house.

'With offset, a company can prepare a new job in a matter of minutes instead of outsourcing and waiting for days for the plates and cylinders to arrive. \

'Within all the years of experience gained through the Drent Goebel period, we identified key limitations to the use and purchase of web offset by package printers.

'One of the major issues was that the total press investment was unfeasible to justify a technology switch inside the company. Another issue is that there is low awareness and knowledge on this technology from both the converters and manufacturers.'

DG press MachineS director Peter Kloppers added: 'Many years of continuous dialogue between us and end users has initiated the need for an improved concept.

'There is an incredible potential for offset in packaging, but a limited amount of feasible offerings on the market.'



#### ON-DEMAND PROOFING AND PROTOTYPING GAINING TRACTION IN THE PACKAGING MARKET

Understanding and interest in on-demand prototyping and proofing systems is growing in the packaging market, according to Roland DG.

The company took strong leads away from the recent Packaging Innovations show, which took place at the NEC in Birmingham, UK on February 27-28, and was described by Roland DG as a "roaring success" for its prototyping and proofing technology, such its own VersaCAMM VS and LEC series of printer/cutters, and the CGS Oris Flex Pack // Web proofing system.

Steve Chappell, packaging, proofing and industrial labeling business manager at Roland DG, said: 'Partnering with packaging heavy weights like Esko and CGS provided us with an excellent opportunity to profile our brand at the show. It also gave us a unique insight into the needs right through the production chain - from agencies and designers to packaging printers and brand owners. The stand was busy throughout the show and the interest in all our solutions was incredibly high."

Packaging, box and carton printers took particular interest in the LEC printer/cutter offering (pictured), according to Chappell, which allows users to create realistic mock-ups quickly using virtually any material, including final production stock.

'There is also the option to print prototypes with white and gloss ink, and embossed effects on-demand, offering the packaging designer and printer versatility without additional cost.

Chappell said: 'In the six months since we exhibited at the last Packaging Innovations in London, we have started to see a breakthrough in understanding and interest in this sector and this was confirmed at Packaging Innovations Birmingham 2013.

Visitors took the time to understand how these products could become real game changers by offering a quicker, more cost-efficient and on-demand proofing and prototyping solution without any compromise on quality.

'The industry is definitely ready for this change as the general environment is calling for packaging designers and printers to be even more creative and competitive.

'We are very excited about Roland's prospects in this market.3

Read more about innovation in the package printing market on pp. 12-15, and more about prototyping and proofing on p53

#### **QBF EXTENDS MIS AUTOMATION** TO PLATE PRODUCTION

The Quick Brown Fox GmbH (QBF) has extended the integration options for its Aramis software to allow it to be connected to Esko CDIs.

QBF said 90 percent of all digital flexo plates are produced using an Esko Cyrel Digital Imager (CDI). These devices can now be connected to Aramis through a new import interface designed to integrate plate production with the management information system.

The Aramis MIS software features numerous automation options, such as integration of customers via a web portal and systems like Esko's Automation Engine and WebCenter products.

With the new CDI interface, the exact dimensions of each plate/patch are

automatically returned to Aramis for correct costing and invoicing. QBF said this means no more errors when entering data, performing calculations or measurements.

Read more about the latest topics affecting the MIS market on pp. 32-33, including comment from QBF managing director Willi Welsch.

#### **JASON OLIVER TO LEAD**

#### **HEIDELBERG'S DIGITAL BUSINESS**



Printing machinery manufacturer Heidelberg has appointed Jason Oliver to head its digital operations, as it shows its commitment to digital printing and plans to expand in this area.

Oliver joins Heidelberg from EFI, where he was responsible for global sales of the Jetrion digital inkjet printing system. In his new role, he will be responsible for the successful expansion of Heidelberg's digital business, and takes responsibility for the company's Linoprint systems for the commercial and packaging printing sectors.

Heidelberg has also appointed Stefan Hasenzahl to lead the company's very large format and postpress packaging business unit, which pools all the company's activities associated with the large format Speedmaster XL 145 and XL 162 presses, and post-press systems. He was previously responsible for establishing Heidelberg's Chinese manufacturing site in Qingpu near Shanghai, which he ran until summer 2012

Before taking up his new role, Hasenzahl managed an internal strategy project at Heidelberg's headquarters. He has been working at Heidelberg since graduating in engineering in 1988.

Stephan Plenz, the member of the management board responsible for Heidelberg Equipment, said: 'We have gained two executives with international experience for areas that are of great strategic importance to Heidelberg.

'The appointment of these two executives underlines the commitment Heidelberg has made to packaging printing/digital printing business areas. It also carries forward our program of expansion in these areas.'



#### NORTH PRINT & PACK TO REFLECT

#### **GROWTH IN PACKAGE PRINTING**

The extension of the established Northprint event to embrace printed packaging – leading to its rebranding as North Print & Pack 2013 – demonstrates how far the print sector is turning its attentions to packaging as a strand in its success strategy, according to the event's organizing team.

North Print & Pack 2013, to run from May 14-16 at the Harrogate International Centre, will see printed packaging given equal billing with other, more mainstream litho and digital print applications. Mary Buck, sales manager for North Print & Pack 2013, said the rationale for expanding the event was clear for organizer Informa back in 2011, with many exhibitors were showing print-on-packaging applications. Visitor research confirmed that a significant percentage of show-goers were looking at packaging.

That 2011 visitor research was backed up by recent in-depth research commissioned by Informa, which reinforced the growing significance of packaging and labeling. The research cites Pira International, which predicts packaging will be the only print product segment to grow to 2014.

The same survey suggests that printers are expecting packaging to contribute more to sales in the coming years than ever before. Printers with a foothold in packaging already see it gaining ground compared with other applications; the rest are keen to get in on this profitable action.

#### **Digital and flexo**

The rapid evolution of digital print technology is a driving force, supporting brand owners' appetites for greater packaging on demand, and further individualization. Informa's research showed that 82 percent of print service providers (PSPs) operating digital equipment and delivering packaging products expect digital print for packaging to become more important to their business.

'That said, the focus on packaging at North Print & Pack 2013 is by no means purely digital,' says Buck. 'Mindful of the absence of a flexo show in the UK since 2005, Informa also set out to deliver a must-attend event for UK flexo printers.

'Judging by the floor plan, it'll be time well spent: the narrow web world is represented by exhibitors including AB Graphic, Alphasonics, Domino Printing Sciences UK, Edale, Flexo Wash (UK), Flint Group, GEW, Herma UK, ISG, K2 International, Nilpeter, RotoMetrics, Sandon Global, Teknek and Xeikon.

'And the packaging community has given the event its full support, with industry bodies EFIA, The Packaging Society and The Institute of Packaging Professionals all contributing insights to make the show relevant to packaging professionals.'

#### Focus on education

Visitors to North Print & Pack 2013 will also experience a big focus on educational content. Three theaters will host sessions designed to develop technical and business skills, at no cost. For packaging printers and SME commercial printers interested in packaging, the Thinking Outside the Box program of presentations covers various topics of interest.

Content for this theater has been devised in collaboration with the European Flexographic Industry Association (EFIA), whose chairman David Galton will kick proceedings off with a look at the significance of product packaging in driving purchasing and consumption.

Subsequent sessions on Tuesday 14 include: "Packaging as advertising – communicating in new ways with the customers"; "The importance of investing in people before technology"; "The latest value-added package techniques"; and "Latest trends of packaging in a digital world – maximising the on- and off-line experience". Dick Searle, chief executive of The Packaging Federation, will close with a presentation on the organisation's Myth Busters campaign.

Morning sessons on May 15 will include an exploration of packaging's usability and finding better ways to package products, while the afternoon sessions, hosted by the Institute of Packaging Professionals (IoPP) UK, will cover a series of stand-out packaging case studies from high-profile brands.

Thursday May 16 will begin with a session from IoPP UK managing director Kevin Vyse on "Responding to increasing demands for design accountability", followed by Jane Bickerstaff, director of INCPEN, considering whether innovation is being stifled by the pressures of cost reduction, recycling and waste management. The lunchtime presentation from Bobst will address "Fitting into the customer's business plan".

Delegates can then look at the case for more sustainable practices with "Can you measure the ROI for going green?".

The Packaging Theatre will also play host to the S'print speed networking event, where attendees get five minutes per contact to exchange details and expertise.

Package Print Worldwide is a media partner of North Print & Pack 2013. Preregister to attend North Print & Pack 2013 at www.printandpack.co.uk







### Commitment to the planet



#### Commitment to the planet

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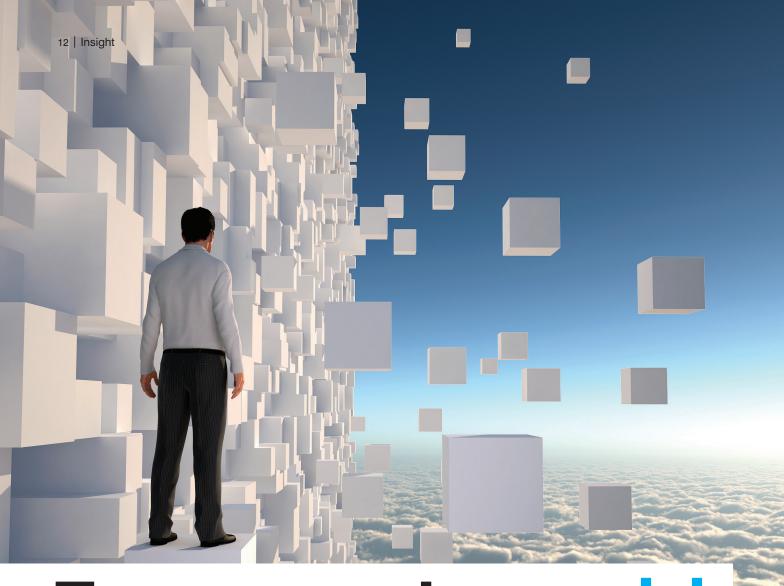




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### Tomorrow's world



Innovation is alive and well in the package printing industry, as demonstrated by exhibitors at Packaging Innovations 2013. David Pittman reports

Ihroughout the package printing supply chain, suppliers are continuing to launch new products, as well as refine and develop existing technologies.

There are a number of new technologies that have been grabbing the headlines, particularly in the 12 months since Drupa 2012. At that show, Benny Landa made one of the biggest splashes when he unveiled Nanographic Printing, alongside other presses, both digital and conventional, and finishing and converting technologies.

In the post-press arena, Highcon's Euclid digital cutting and creasing system for folding carton production is one of the technologies that has stood out as an innovative addition to the market, with the first two converters to invest in the technology to start running commercial applications in the near future.

The UK's Glossop Cartons (see p22)

and Belgium's Antilope were scheduled to have their Euclid's installed and operating by the end of April, with Glossop exhibiting at Packaging Innovations 2013 to present this development to the market, supported by Highcon.

They were not alone in pushing cuttingedge products and processes at the show, with organizers claiming that some two-thirds of exhibitors at Packaging Innovations and its five co-located shows, Labelling Innovations, EcoPack, PackTech, Print Innovations and Contract Pack, used the event to launch new technologies, materials, design techniques, services and concepts.

#### Suppliers

This extended from material providers and pre-press suppliers, to finishing specialists. Digital imaging specialist FFEI launched RealPro Toolkit, a feature-rich suite of software tools designed to overcome challenges in the labeling and packaging pre-press cycles.

FFEI said RealPro Toolkit increases productivity, and standardizes document structure from design concept to production-ready files.

RealPro Toolkit consists of more than a dozen modules designed to address specific pre-press workflow requirements, such as file editing and preparation, color management, trapping, and step and repeat tasks, which can be placed at the relevant point in the production cycle.

FFEI managing director Andy Cook said: 'We're looking to provide improvements in the pre-press process.

'Printing is where errors become a reality, and this is where they become expensive, so we want to help eradicate them during origination and pre-press.

'The modules are designed to be sold in complementary packages that are



installed at the correct point, so taking redundant software out of the equation.'

Cook added that FFEI offers more than just software, with Caslon, developed in collaboration with Nilpeter, an inkjet print system to complete the digital production cycle.

'We are taking a more holistic approach and not just offering software,' said Cook. 'With the Caslon we are able offer a whole system.'

Foil suppliers Kurz and Blockfoil both spoke about how this finishing technology can be a valuable addition to brand owners' packaging.

Blockfoil used Packaging Innovations to promote the different effects that can be achieved with foiling, such as photographic, embossed and color-shift designs.

Photographic foiling is a process that Blockfoil already licenses out to the Bank of England for use on £50 notes, but is now promoting to the packaging industry.

Managing director Barry Corbett also highlighted transparent foils as a means to achieve a comparable look to spot UV, and said: 'Foiling is about more than just blocking out parts of a design with a reflective material.

'You can create interesting and unique effects with foils, but many are unsure of what can be achieved.'

Mark Ruffalls, sales manager for security at Kurz UK, agreed, and said: 'Foiling is an important brand enhancement tool. It can add real value, whether using embossing or transparent solutions.

'We are developing different foil products, which can be combined to offer a valuable solution. 'We are also able to bring some of the technologies from our high security offering into packaging to offer further brand enhancement.'

Ruffalls added that any system must be cost-effective, to both the brand owner and the converter. 'The proof of concept can occur in the packaging manufacturing process, adding value at an early stage rather than retrospectively adding a label featuring foiling at a later stage.

'For the converter, they must be able to integrate the process into their existing operations, otherwise it will be too big of a barrier to entry in terms of cost.'

Material supplier BillerudKorsnäs continues to push its FibreForm, a fiberbased material manufactured from 100 percent primary fibre. It is approved for contact with food and it can be coated with a wide range of films to protect against light, moisture, bacteria and other impurities.

It can be printed using numerous printing processes, including flexo and gravure, as well as embossed and formed to create visual effects not usually associated with fiber-based packaging.

This, a spokesperson for the company said, means it 'ticks all the boxes', both suiting consumer demand for more environmentally-friendly products and corporate social responsibility initiatives.

BASF also continues to make the most of a product promising enhanced sustainability, Ecovio.

Ecovio is a biodegradable plastic featuring the company's compostable Ecoflex polymer and polyactic acid, which is derived from corn. Packaging applications for Ecovio include coated

paper, shrink films, injection molded products and foam packaging.

Compostable packaging made using Ecovio was debuted last autumn, with 100 fans at a Seattle Mariners Major League Baseball match against the Boston Red Sox given peanuts in bags made from the biopolymer.

#### **Printers and converters**

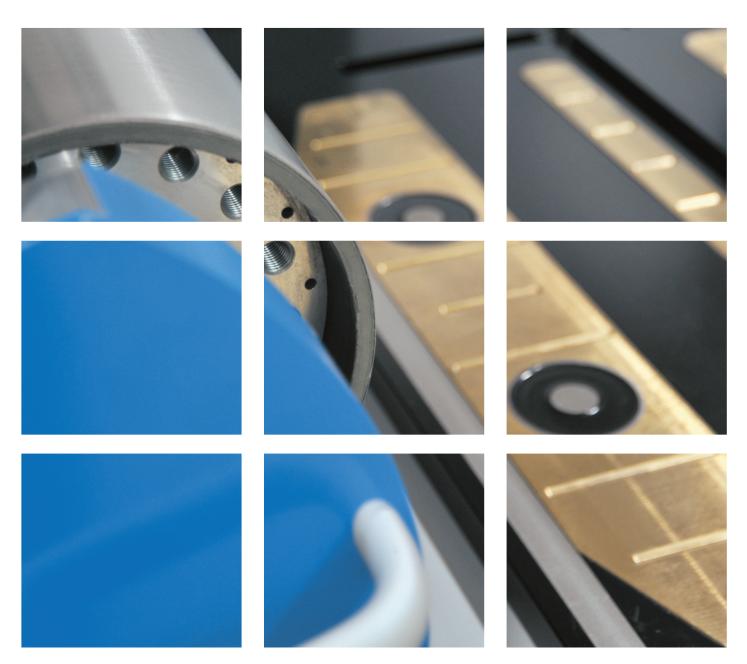
Such innovations highlight the opportunities being brought to market and offered to printers and converters, and how, if the time and effort is invested in researching the potential, they can benefit.

Some converters were on hand at Packaging Innovations to present their latest investments in innovative processes and production, such as Glossop Cartons.

Global flexible packaging manufacturer Printpack spoke about 4SIGHT, a new gravure fixed color palette printing system that uses a reduced number of process colors compared to standard gravure, and includes the facility to add special colors to create a wide ranging color gamut. The color book offers designers and marketers many thousands of colors to choose from.

Printpack has also introduced highresolution gravure (HRG) printing technology, developed in partnership with Keatings Gravure.

Printpack has launched HRG in response to the demand for especially advanced graphics. It can be used to print all material structures, including monoweb, duplex and triplex laminates. When combined with Printpack's fast-



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track service, HRG offers a speed to market equivalent to current flexo expectations.

Fellow flexible packaging supplier Tyler Packaging showed many of its packaging products at the show, including pet food packaging that accounts for around half of its work, while sales director Adam Kay spoke of the company's investment in extra capacity in 2012.

Tyler has also introduced new pouch styles, including a hooded pouch and a "shaker" bag. Available in four stock colors, with other options available, the hooded pouch features a smaller sized hood coupled with a patented slider.

The shaker bag is a pouch featuring an inner perforated membrane and slider base to allow products to be easily dispersed, such as lawn seed.

Tenza Technologies and Ampac are also investing in flexible packaging. Tenza has recently launched a range of stand-up pouches into the UK, sourced from the Far East via a European import partner, that includes spouted, doyen, side gusset, shaped retort and flat-bottom styles. Tenza's stand-up pouches can be printed in up to 10 colors.

More detailed coverage of Tenza's growth into stand-up pouches, and the potential of that market in general, can be found on p18, and technical sales director Glenn Proctor said the company received a lot of interest and picked up multiple leads at Packaging Innovations.

Ampac has also introduced a new stand-up pouch design, featuring a pull tab that the company says allows those manufacturing non-carbonated beverages the chance to penetrate the growing market for drinks sold in flexible containers without violating existing patents.

The pull tab concept features a pouch fitted with a label, which when removed creates an opening for a straw. Both the pack and the tab can be printed, with customizable printing permitting brands to launch competitions based around the collection of the tabs.

Ampac has further introduced its Bio Flex pack, designed for dry products. The composition of the material makes it fully recyclable to the European standards EN 13342 and US ASTM D6400, with 90 percent of the material composted around 70 days after disposal.

Both the inks and adhesive used in the material are biodegradable, making the Bio Flex laminate unique according to Ampac, and allowing brand owners to create appealing packaging using its 10-color flexo capabilities.

Printers and converters in the carton market are innovating also. Take Firstan for example, which is one of the early adopters of Benny Landa's new digital printing process, nanography. It signed a letter of intent for a sheet-fed Landa S10 press, its first major foray into the digital printing market, last year, and is set to be one of first sites to have a Landa Nanographic Printing press installed later this year.

Falconer Print and Packaging continues to make strides with its Diana X 115 folder gluer from Heidelberg.

Installed just over a year ago, the capability to produce in-line Braille, coupled with WH Leary detection and ejection systems, has allowed the company to reduce the cost of adding a legally required aspect of pharmaceutical packaging.

Falconer previously produced Braille on its die-cutting unit, but with high tooling costs has worked to turn all of its customers onto using the in-line process.

A spokesperson for the company added that the ability to read the Braille dot height, and confirm the validity of the dots embossed on the carton, are big benefits to the pharmaceutical market.

Carton converter Benson Group has launched a number of innovations of late to showcase its credentials, starting with a new-look website that is optimized to make the most of the growing amount of internet traffic originating from mobile phones and tablet computers.

The company also showcased the imagined "Benson Beauty" brand and its packaging, typical of the selection that many healthcare brands might need to produce, to show some of the print effects and post-press options that Medica Packaging, and Benson Group as a whole, offers. This included varnishes, foils and a gunmetal effect, as well as different window options and a seven-panel design.





Fujifilm has invested heavily at its Broadstairs, UK site, as it makes a commitment to UV digital inkjet, and wide format, printing. David Pittman visited the site to see how the money has been spent.

The new manufacturing facility at the Fujifilm site in Broadstairs in the UK has been two years in the planning, and is the result of an investment of over €4 million.

The new manufacturing facility has a footprint of 1,800 sq m and occupies former warehouse space. It has been built to accommodate a projected annual increase of 56 percent in the production of UV ink at the site, which are distributed globally. Fujifilm said this projection reflects the demand for its wide format digital inkjet systems, and the success the company has recorded in helping its customers transition to digital.

To fulfill this projected growth, the company took the decision to invest in its digital ink production, which sits alongside the continued manufacturing of screen and flexo products.

Jon Harper-Smith, marketing manager for industrial at Fujifilm, says established products remain a key part of the business but have acted as a facilitator to its investment in digital inks.

'Screen and flexo products remain a healthy part of the Fujifilm Speciality Ink Systems business, while digital inks will take on a bigger role in the future. Business for our screen inks has declined, as is the trend in the wider market, but the decline has been less than had been expected, while digital and flexo has grown at a faster rate than had been forecast.

'This environment means we're able to invest in the future growth of digital with support from our established channels.'

#### **Capacity boost**

The extended facility now has the capacity to manufacture 6,000 tonnes of digital ink per year, which will be produced in a variety of packs from 250ml RFID-tagged pouches and cartridges, up to 10-litre packs for high-productivity, wide format printer platforms.

This includes the ability to manufacture ink in four-tonne batches, as opposed to the previous one-tonne capacity, with four new tanks fed directly from the raw material storage silos, and controlled from a single workstation to centralize and streamline management of the process.

The investment in production machinery includes a host of new and upgraded units, such as a new high-capacity mill to help achieve the dispersion characteristics which Harper-Smith says are paramount in inkjet inks, through to a highly automated packing line, which speeds up bottling.

As the Fujifilm digital business grows, so the manufacturing space allotted to such products will be able to grow further, and house further equipment such as additional mills, with the new facility able to expand into areas currently used to produce "legacy" products.

Colin Boughton, operations director of the Broadstairs Fujifilm Speciality Ink Systems site, says: 'We have planned everything meticulously over the last few years, recognizing that to stay at the forefront of digital ink technology with our range of Uvijet inks, we need to work with state-of-the-art equipment and have the ability to increase production and packing volumes.

'Our vision is to remain at the forefront of this technology and to re-invest every year in order to maintain that position. For instance, we have worked closely with a specialist company to develop next generation dispersion equipment for our inks, and this will allow us to reduce particle sizes to less than 100nm – true nanotechnology.'

Boughton adds: 'Further investments in equipment will take place during 2013, keeping Fujifilm at the cutting edge of UV digital ink manufacturing and packing technology.'

#### Research and development

Manufacturing growth will be supported by research and development (R&D) carried out at the site, in which Fujifilm has also invested heavily, with upwards of €2 million spent as part of the Broadstairs development.



Research and development director Rob Fassam says the investment in R&D at Broadstairs follows consistent spend in that side of the business over several years, which will be followed by further expansion in the footprint of the space dedicated to research at the site.

The R&D carried out the site uses small batches of ink produced specifically for testing, which includes: physical tests, such as abrasion and lightfastness; analytical tests, like chromatography; jetting; and temperature testing using freezers, chillers and ovens to investigate the performance of formulations in a variety of environments.

R&D spend has also gone on people. Some 60 staff are currently involved in R&D at the Broadstairs site, while in the past year around a dozen additional employees have been recruited. Fujifilm is also investing in tomorrow's R&D professionals, with several members of its laboratory staff attending a day-release degree program at a nearby university. The staff play a key role in its current R&D work, but will also help shape the future.

#### **Employees**

In total, more than 340 employees work at the Fujifilm Broadstairs site, and over 80 percent of these are involved in the R&D and manufacture of digital ink. Fujifilm looked to include its workforce as much as possible in the development plans for the new digital ink area, with over 80 employee ideas being used in the final design of the facility.

The involvement of employees extends across the site, with all invited to come forward with ideas to improve productivity and make efficiency gains as part of an overall drive to make manufacturing at the site as lean as possible.

Feedback is given on all ideas, and rewards are presented when employees have reached a specified number of submissions.

#### **Award-winning**

Fujifilm Speciality Ink Systems has already received praise for its work at the Broadstairs site, which won the Best Process Plant Award at the 2011 Best Factory Awards as organized by the Cranfield School of Management and Works Management magazine.

Awarded long before the new digital ink facility was opened officially in January 2013, finalists were initially selected after a full documentary examination, which was then followed by an audit of the manufacturing site.

Fujifilm Speciality Ink Systems was shortlisted along with 14 other finalists, and Harper-Smith says entering the award process was initially done as a way for the site to benchmark its activities against other manufacturing facilities in the UK, although it ended up winning.

The judges from Cranfield School of Management were impressed how Fujifilm Speciality Ink Systems is transitioning its manufacturing operation from analog screen inks to digital inkjet inks, as well as its "right first time" efforts, which reached 100 percent over the course of a week in early March for the first time, and the 5S housekeeping program throughout the plant.

At the time of the award, Boughton said: 'We must not rest on our laurels. We need to sustain our achievement and strive to improve, especially in the areas where we know there are opportunities.'

Fujifilm hasn't rested on its laurels, as the new digital ink manufacturing facility shows, and its plans for further growth and investment should mean Boughton's hope for Fujifilm Speciality Ink Systems to remain at the forefront of digital ink technology are achievable.

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## Standing up for pouches



Tenza Technologies technical sales manager Glenn Proctor tells David Pittman how stand-up pouches fit the changing retail packaging marketplace, and explains why it has moved into this growing segment.

he UK's Tenza Technologies has launched a new range of pre-formed stand-up pouches in order to target growth in the market.

Stand-up pouches are found across the retail spectrum, from the pet food aisle to fresh food chillers, and Tenza unveiled its new family at the recent Packaging Innovations show.

#### Stand-up demand

Coverage of the growth in stand-up pouches over the last year can be read through *Package Print Worldwide*, with Amcor winning awards for water packaging designed in that style and Smurfit Kappa offering Pouch-Up as an alternative to glass in the beverage market.

Pouch-Up products are available in 1-5-3l sizes, with 100 percent printable surface and Vityop closure to extend the life of drinks after opening.

Market research company Freedonia has reported that stand-up styles will lead pouch growth in the US to 2016. The overall market's value is projected to increase 5.1 percent a year to US\$8.8 billion, with stand-up pouch demand forecast to expand 7.2 percent annually to a market valuation of US\$2 billion in 2016.

Freedonia said this will be driven by faster gains stemming from sustainability, functional and marketing advantages over alternative packaging media.

Smurfit Kappa claims similar benefits with its Pouch-Up product, noting that the lightweight, free-standing beverage pouch has a 100 percent printed surface for branding, a dispensing Vitop tap that extends the life of drinks after opening and a carbon footprint of just 20 percent of a traditional glass container.

Tenza is following suit with its marketing of stand-up pouches by claiming that, in comparison with more traditional types of packaging, such as tins, jars, bottles and cans, stand-up pouches offer packaging volume reduction due to their thin profile and high ratio of surface area to volume, as well as cost savings due to their

compactness and light weight. Other advantages include shape and printing area, and the variety of opening features and closures available.

Tenza stand-up pouches can be printed in up to 10 colors, with a varnish if required, allowing virtually unlimited design possibilities and a premium look that aids on-shelf marketing appeal, Tenza says.

#### **New markets**

Tenza is a UK manufacturer and supplier of self-adhesive and non-adhesive packaging products for the industrial and food packaging sectors, as well as the office products, stationery and label markets.

Stand-up pouches are a new addition to its portfolio, which has previously centered on "enclosed document" envelopes, named Tenzalopes, as well as self-adhesive and pressure-sensitive label stock for the label printing industry.

Its stand-up pouches are not directly manufactured in the UK; instead it works with an overseas purchasing partner to supply the market. It said this means it can satisfy small orders, giving the market the flexibility to trial stand-up pouches.

Its growth in the market will be driven by Glenn Proctor, technical sales manager, who has been recruited to push the new format.

With Proctor, Tenza has inherited strong experience as he has worked at Alcan Packaging, and then Amcor after its takeover, as well as spending time with Rexam.

'We have hit the ground running,' Proctor says. 'After establishing a solid and sustainable relationship with our purchasing partner overseas.

'Since my joining Tenza last October, the team and I are already following up on a number of positive leads and prospects. We hope to receive our first orders by the end of the first quarter this year.'

Proctor says stand-up pouches have come a long way since their introduction to the UK market, from weight reduction credentials to a means to provide new and innovative consumer packaging.

#### **Growing demand**

The growing demand for stand-up pouches is a trend Proctor is looking to capitalize on, with their increasing use to replace cans and jars as packaging with a long shelf-life, plus their ability to withstand chilling during storage and heating during cooking, including microwaving.

He notes that there are some markets for pouches, such as ready meals and wet pet food, already served by key suppliers, like Amcor and Mondi.

To avoid competing in saturated markets, Proctor plans to pitch Tenza's offering at businesses looking for small volumes, and at helping start-up food ventures where the volumes are too low for large suppliers to service.

One of the first markets Proctor is looking to tap is cleaning products for the automotive market. This is an area that predominantly uses rigid packaging in the UK, but other markets, such as Scandinavia, have shown that there is the potential for pouches to come in and take a share of the market.

Shell is one of those already offering such products in pouches in the UK, and Proctor hopes others will follow suit. However, he is aware of the challenges faced introducing new products to an established market, so is starting conversations with contract packers to devise an all-in-one system that will allow the market to test the response by British motorists to the change, and show how it can work, leading to them investing in the technology.

'At Tenza we are leading the way in developing new applications for this consumer-friendly form of packaging,' he says.

'With our ability to offer small minimum order quantities and low origination costs, we are able to give creative retailers more flexibility and new ways to display their products in order to maximise on-shelf impact.'



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## A press for many uses



Nuova Gidue has developed a combination offset press designed to convert a range of packaging products in-line. David Pittman speaks with managing director Federico d'Annunzio about the company's new M9 platform, and how such a press fits into the modern printing environment.

talian press manufacturer Nuova
Gidue recently unveiled the M9
press platform, designed as an "allin-one-pass" multi-process press
for the carton market, plus the wider
packaging industry.

Some 14 months in the making, the press has been designed by Gidue with flexibility in mind, and can handle materials ranging from  $38\mu m$  BOPP to 500gsm carton substrates, as well as utilize solvent-based, water-based and UV-curable inks.

It also has interchangeable platforms for various processes, including flexo, screen, cold foil and hot stamping stations, and offers multiple converting possibilities, from shingle delivery sheeting and high-pile stacking, to roll rewind and single-piece shingle delivery.

Gidue's managing director Federico d'Annunzio says such flexibility is what the packaging industry is looking for.

'Single-product dedicated presses are not flexible enough for the new packaging market,' he says.

'Brand owners ask for multiple packaging solutions, which can range from roll-to-roll, roll-to-sheet or roll-to-single piece, for carton boxes or wet-glue labels.

'A relatively important investment should not be dedicated to a single product as risks in sudden market changes should be considered. The M9 is an answer to converters' requests for a flexible press to produce high-end multiple packaging solutions.'

He adds: 'The labels and packaging industries are getting closer; the M9 is designed to create a "bridge" between the two markets. The M9 fulfills most of the commitments of high-end added value packaging, which can be produced "all-in-one-pass" using several printing and converting technologies. This also helped us to develop new "short-run" technologies in gravure, offset and flexo printing, and in the converting sections.'

#### Design

The M9 features a completely redesigned offset print group with heavy-duty frames,



independent servo-driven inking units and format cassettes, to achieve short set-up times and reduce waste. Each M9 is driven by a total of seven servo motors.

The M9 also offers a new flexo print unit that can use waterbased and UV inks with a high-power drying speed on heavy solids. The flexo unit is placed on the Gidue Universal Platform and can be interchanged with screen, cold foil and hot stamping process heads.

In addition, a new "heavy-duty" tension control system for carton up to 500gsm has been developed, while a heavy-duty rotogravure unit is available with an impinged air drying system that can print with water- and solvent-based inks.

A converting section has been designed to complement the printing functionality, and includes: three die-cutting stations for self-adhesive substrates; three heavy-duty stations for thick carton for embossing, creasing and die-cutting; one rotary servo-driven sheeting station for heavy carton; one highpile newly designed high-speed stacker; and one dedicated delivery table for beer labels.

D'Annunzio says: 'The main advantage is the possibility to offer complex packaging solutions which would otherwise be difficult or non-profitable to obtain on traditional sheet-fed offset presses.

'An "all-in-one-pass" solution, coupled with the servo and software technologies, allows the production of extremely sophisticated and high-quality packaging solutions, with limited waste and set-up times.

'Each process can be used for its specific advantage: gravure for low-cost, high-quality metallic inks and whites; flexo for its wide flexibility; offset for the process jobs on rough surfaces; cold-foil for its economic brilliant decorating effect; screen for unique graphic effects; plus all the converting possibilities of embossing, creasing, sheeting and die-cutting of single pieces. The M9 press takes advantage of the multi-substrate/multi-process experience of Gidue, and of the several automation technologies developed during the years to help operators during the set up and the production phases.'

#### A culture of flexibility

One of the key changes with the design of the M9 is the dimensioning of the print units and the tension control in order to handle stiffer and thicker carton materials.

This capability of the M9 was shown at an Open House event in Italy earlier this year, with a 12-color carton job running on 450gsm material shown alongside the carton converting options.

Outside this change to handle thicker and heavier carton substrates, d'Annunzio says flexibility is not a new concept to Gidue. 'Multi-substrate, multi-process handling has been part of Gidue presses for almost 12 years, and it is part of our consolidated company "culture".'

To illustrate this, Gidue used the Open House to show a changeover from the carton job to a 12-color paper job, providing an idea of how it can switch from carton to self-adhesive label work.

#### Interest

The Open House itself attracted attendees from across Europe, the Far East and South Asia, despite being a low-key event targeted at Gidue's "traditional" customer base of label converters.

'We had visitors from Europe, China and India, showing that the interest in our new products for packaging is spreading to the label industry,' says d'Annunzio.

'In the first months, we will focus the introduction of the M9 mainly on narrow web converters who already know Gidue's quality and reliability. After the first installation has been successfully producing for 6-12 months, we will extend our focus also to the packaging market, which tends to be more conservative and needs proven solutions on the field.'

The first M9 is being installed by a Chinese printer during the first half of 2013 to print liquor boxes and cigarette packaging, and, alongside plans to focus on existing customers, Gidue plans to be broad with its targeting of markets around the world.

'Obviously the key objective of a printing press is to create profitability,' says d'Annunzio. 'The M9 can be profitable for companies who are looking to produce high-quality sophisticated packaging, and who want to offer several solutions to the same customers.

'Emerging markets and traditional Western markets should be looking at this possibility, may be for different reasons: to maximise efficiency on existing high-end packaging products, create new markets or look for niche markets.

'But there should not be a geographical focus; the M9 is dedicated to the carton and packaging markets.'



## Cutting-edge conservatism



The UK's Glossop Cartons made waves in the converting industry when it became the first to sign on the dotted line as a customer for Highcon's Euclid digital carton cutting and creasing system for short-run packaging. David Pittman spoke to directors Brian and Jacky Sidebottom about the investment, and what it means for the future of the company.

etail packaging manufacturer Glossop Cartons has adopted a conservative investment strategy in its three decades serving the UK market with printed packaging, from cartons and display units, to blister pack cards and hanging cards.

This has included recent investments in a Mitsubishi D3000LX B1 format litho press, complementing a Mitsubishi V3000 press already installed at its plant in Derbyshire, and a Fujifilm Acuity LED 1600 UV LED inkjet printer.

However, this reserved investment

protocol went by the wayside when, at the end of January, its directors visited Plantin in Brussels, Belgium, to see a Highcon Euclid demonstration unit.

The Euclid is one of a new breed of cutting-edge technologies from across the packaging supply chain that promise great benefits, particularly when it comes to managing and improving digital printing workflows.

Plantin is a member of the Staples group of companies, itself a European distribution partner of Highcon that sells, supports and services the Euclid in Italy, Spain, Belgium, The Netherlands and Greece. A Euclid was installed in Brussels to showcase the system at the end of 2012.

This has already paid off with Belgium's Antilope Group and Glossop Cartons signing up as the first two customers for Highcon, with Glossop's decision to invest made on the day of its visit.

'I still really can't believe we were the first to sign up,' says Glossop Cartons director Jacky Sidebottom.

'We've always taken a conservative approach to investment, and made sure that any equipment we buy will work for us and our customers.'



Her husband Brian, a fellow director at the company, says it and Highcon will have a collaborative relationship, as, 'we will be able to provide it with commercial applications, and will be able to test what the unit can do and find new applications for it'.

#### **Looking forward**

The Highcon Euclid is a system designed to alleviate bottlenecks caused by delays in die supply, long setup times and error or design correction/editing, often associated with analog converting and finishing, and which are heightened when using digital printing due to faster make-ready capabilities earlier in the production cycle.

Glossop Cartons is not currently using digital printing, instead operating litho presses, although it is looking at introducing a more comprehensive digital solution, and attended last year's Drupa to find out more about the latest digital printing processes.

With the Euclid, Glossop Cartons is looking to enhance various facets of its business, such as creativity, responsiveness and reducing the time it takes to bring packaging to market. Highcon says this makes Glossop Cartons an ideal customer for it to work with to promote the flexibility and

potential creativity offered by digital cutting and creasing.

Brian Sidebottom says: 'The Euclid offers benefits to conventional print processes as well as digital. As an example, we're able to offer savings by ganging short-run orders together without incurring the cost of producing specific dies each time.'

The Euclid was debuted at Drupa, and since then, Highcon has continued to develop the process, addressing technical issues, such as the level of scorching created along the laser-cut edges.

'We knew about some of the initial issues that were being spoken about, but the progress made since Drupa has been huge,' says Brian Sidebottom. 'The initial problems with scorching of the substrate have gone from being visible to being negligible, and the improvements will only continue.'

The pair will also look at further processes, such as how to strip away waste; possibly digitally by burning away the excess material.

Brian Sidebottom notes that this would require the work that has been put into creating a focused laser to produce intricate and detailed cutting being reversed to burn away larger areas.

'As a partner, we will be one of the first to receive any advances and

developments that can be retrofitted and enhance the Euclid's potential.'

#### **Packaging innovation**

Despite not being installed until early spring, Glossop Cartons has already benefitted from the Euclid after making its expo debut at February's Packaging Innovations, and reporting heavy footfall and interest from attendees. It was also able to book orders directly off the back of its presence at the show, which also included a pair of Packaging Superheroes walking the show floor.

Highcon's vice-president of sales and business development Chris Baker says other converters, primarily across Europe but also extending into North America, will soon be able to capitalize on the interest generated by digital carton converting, including those in other print markets looking at packaging as a way to diversify their business.

'More sales in Europe are to be announced soon, but we're also seeing the commercial printing market take more of an interest in the system.

'Commercial printers tend to be more au fait with digital processes than the existing packaging market, and with the pressure that market is under, they are looking to see if they can make it, and the economics of packaging, work for them.'



## Future growth



Fiber-based substrate suppliers are continuing to make great strides in providing sustainable packaging. David Pittman reports

n the second issue of *Package Print Worldwide* last year, material suppliers to the carton market waxed lyrical about the environmental credentials of the products they produce, with the "cradle-to-cradle" nature of fiber-based materials spoken about as a key tool to promote their products as an environmentally friendly packaging product.

Fast-forward a year, and the environment continues to be a hot topic for the market.

'Sustainability and carbon footprint are huge topics,' says Pasi Piiparinen, the head of Metsä Board's paperboard business. 'This is being driven by consumers and brand owners, with growing concerns about the carbon footprint of products and their packaging throughout the lifecycle.'

Sappi Alfeld's Lars Scheidweiler says: 'The demand to replace non-bio materials with bio-based materials is strong in the market, with brands and consumers looking to replace non-environmentally friendly materials with those that are.'

Staffan Sjöberg, Iggesud's public affairs spokesman, says the environment

has become a much more important topic in the last 10 years.

'We're taking not only printers and converters on tours of the forest and our facilities, but also brand owners, who are sending big delegations to find out more about our processes.'

#### The price of sustainability

Cost has always been an issue in this discussion, and Scheidweiler says: 'When push comes to shove, people don't seem to want to pay more for sustainable products. They are shouting for it, but is there a willingness to pay?'

Fredrik Werner, segment development manager for general packaging at Stora Enso, agrees that cost is an issue, and will remain so, but notes movement in the right direction in the consumer market when it comes to packaging that is more ecological.

'Cost has always been the main issue in this discussion, but we are starting to see movement now. Cost will remain an issue for brands but there are moves in the right direction, and positive talk. There are a number of sustainability targets and reduction goals set for 2020, and that will come around quickly.

'Concerns about the amount of resources being used are also taking precedence, with worries about the rate at which the population and consumption rates are growing.'

Werner adds: 'The carton Industry must tell its positive story in this context, especially when fiber-based materials can be used up to seven times before being returned as energy to the cycle. With this, packaging does not need to be seen just as waste. It's a perfect resource, and we must tell this strong story to brand owners and consumers.'

As part of the environmental equation, many suppliers to the carton market have made large investments in their processes.

Metsä Board has just completed a twoyear €120 million investment program that increased the company's folding boxboard capacity by 150,000 tonnes per year. The investment also included a new bio-power plant that reduces its carbon dioxide emissions by 100,000 tonnes per year.

Iggesund has likewise made moves to switch its production to renewable energy. At its Swedish mill in Iggesund, the company claims it has invested more than €100,000 a day for the past 10 years, with a "focus on the environmental consequences of investments".

2012 saw the inauguration of a new recovery boiler at the mill in Iggesund. The €240 million investment is to shortly be followed by a further multi-million Euro investment in a biofuel boiler at its Workington mill in the UK. This will see the site switch to operating solely on biomass without carbon emissions from fossil fuels.

Guy Mallinson, sales director at Iggesund Paperboard, says: 'When both politicians and industry organizations emphasize strongly that reduced fossil carbon emissions are the way of the future, it's a wise idea to listen. We know that our product portfolio, both from Iggesund and Workington, will now belong to a small, exclusive group of paperboard products whose manufacture involves extremely small amounts of fossil carbon emissions.'

Traceability is another side to the environmental story, which Piiparinen is keen to talk about. New rules from the European Union governing the supply of timber products came into force on March 3 (see *p5*), which directly impact the need to provide traceability.

'It's a sensitive subject in the market, and we are receiving a lot of questions about the origin of our products,' says Sjöberg. 'We foresee that there will be much more interest in certification going forward, both due to the environmental concerns and the fact that brands do not want any surprises coming from their suppliers.'

For Metsä Board, the make-up of its parent as a cooperative of forest owners strengthens its position, and story, in relation to traceability.

'We have a good story to tell, and have been telling it for many years. This means the traceability of our products is well known and very accurate,' says Piiparinen.

#### Other factors

The trend towards short runs is something Sappi's Scheidweiler highlights as being of big importance to suppliers to the carton market. With converters being asked to be more responsive by their brand owner customers, with versioning and SKU diversification increasing in the retail market, so carton suppliers must be able to respond accordingly.

'Orders are being split, which might not affect the overall order volume, but means multiple orders are being placed instead of a single larger quantity.

'The challenge for material suppliers is to be able to react quickly and supply products faster, while at the same time the demands on quality are increasing.'

In this vein, Metsä Board opened an Express Board service center for all its folding boxboard grades at the Gohrsmühle mill in Germany in November 2012.

This move towards smaller, more frequent orders poses further questions about consistency. 'Cartonboard must have the same tolerances throughout to provide consistent on-press performance with the same print results each time,' says Scheidweiler. 'We are working on developing this, as it is very important that the market has confidence in us as a supplier, in terms of both quality and service.'

#### Research and development

To meet these changing needs, suppliers are carrying out research and development, and investing in new processes, such as Iggesund's renewable energy initiatives.

However, developments in the carton market always come in small steps due to the nature of growing and harvesting timber, and the capital expenditure involved in production. Iggesund's Sjöberg says: 'We have taken care to improve our products, and have done so for



many years. This doesn't involve the launch of new brands, as happened with Creato in 1996, but focuses on improving the mechanical and print properties of our products.

'Stiffness and weight are just two of the things we have looked at, and continue to do so to achieve improvements in the product that benefit the market.'

'The industry is carrying out research, but big leaps in production technology in the short-term are unlikely,' says Piiparinen.

'Continuous change and evolution is how the market will progress.

'That's not to say there are not lots of ideas in the industry; more that some will never become a reality, while others will evolve and develop over time.'

Sustainable barrier coatings are one such product category that is being looked at, according to Werner.

'Stora Enso is making a lot of effort in this area, both through its own work and in collaboration with chemical partners.

'We are working to develop products unique to us, and would like a perfect solution to be available tomorrow, but the industry is about evolution, rather than revolution.'

#### New markets

Piiparinen says that one way the carton market can make advances is in the discovery of new markets for existing products.

'I'm a big believer in looking for new markets and new opportunities, especially for folding boxboard. There are lots of new uses coming about for folding boxboard, and it is winning market share from other fibrous materials.'

For Metsä Board, this includes primary and secondary packaging materials to help its customers, and their end-user customers, achieve their sustainability goals. 'There are many markets and end uses where folding boxboard has not yet even started to penetrate, and we want to be at the forefront as it grows,' says Piiparinen.

'The whole packaging market, from logistics and services through to the suppliers, are facing many opportunities and challenges,' says

Scheidweiler. 'I've seen examples of embossing and debossing of up to 2.5mm on board, which is something you expect to see on other packaging materials, such as metal.

'The market is changing and we must be able to respond.

'It's getting more difficult to hook consumers, and the fight to grab the consumer's attention is intensifying. The carton market needs to supply products that make the difference by improving the onshelf appearance and allowing brands to produce packaging of a higher quality.'



## Consumer insights to drive 2013 packaging trends

Steve Callahan, president of Perimeter Brand Packaging, shares four packaging trends that will be seen this year with Danielle Jerschefske.

s the consumer packaged goods industry evolves, package printers and converters need to look beyond the customer purchase order and adopt a consumer validation mentality.

Research and development traditionally focuses on the engineering and technology versus human perception. If a product's label is truly the ultimate billboard, the industry needs to understand how their business serves the end-user.

The end result will be an informed dialog with brand owners and purchasing departments, which present both technical feasibility and consumer utility.

Recent research revealed that over a five-year period, less than one percent of products launched are considered innovative. Many new product launches are simply line extensions or slight improvements to the product.

True product breakthroughs have one consistent theme – engaging early on with consumers to understand their insights and pain points. Discovering how consumers interact with a package's structure and label is a critical step in launching truly innovative and successfully accepted products.

In 2013, expect to see the following trends that are relevant to the packaging industry: on-the-go, out-to-share, speed-to-volume manufacturing and multipurpose.

#### On-the-go

We live in a mobile society. With the average American adult spending 2.5 hours in their car every day, people call cars their second home. And when people aren't running errands around town, they are traveling across the country.

As a result, consumer products groups (CPGs) are racing to provide consumers with miniature, travel-friendly versions of all their favorite products to take the comforts of home with them on the road. CPGs are already taking note of this trend and are taking it one step further



as many products have been designed to conveniently fit inside car cup holders. Everything from Puff's tissues to Oreo cookies are now easily accessible and only an arm's reach away.

For long-distance travel, stores now devote an entire aisle to travel-size items – dominantly personal care products like shampoo, soap and shaving cream to allow passengers to abide by size and quantity restrictions.

In 2013, expect the trend to grow beyond the personal care industry. Food and beverage brands have already taken notice with breakthrough products like Kraft 's MiO in 2011, a liquid water enhancer, which Kraft claims is the first new category launch for the company in 15 years. AdAge reports that MiO holds 12.28 percent share in the fruit drink mix category. Coca-Cola and other competitors have launched similar products to regain market share.

With sweeteners rapidly replacing traditional white sugar, Splenda released a new Splenda Minis product. Splenda Minis are dissolvable tablets that come in a protective case, providing Splendalovers with an easy click-button solution to fill their sweet tooth while they are on the run.

On-the-go is not only convenient for consumers, but also a win for CPGs, as the product can be sold in an entirely new storefront space or as on-pack bonuses or trial versions packaged with full-size products consumers normally purchase.

These bite-size solutions provide incremental revenue streams at king-size margins and open up new retail opportunities, such as vending and convenience stores.

As packaging producers commit to consumer validation in 2013, it's important to understand the opportunities and challenges. Do consumers prefer subtle branding since they are often used in public? Consider the refill implications for consumer usability and whether a potential solution can hold up to wear and tear – in terms of material selection and graphic design.

#### **Out-to-share**

Consumers are increasingly choosing to make their experiences a shared one with friends, family and co-workers. This desire to share is translating over into the packaging world with solutions that move seamlessly from the store shelf to at-home use.

In 2013 we will be seeing many more packaging solutions that encourage community consumption, and can be served directly from the original package.

Some of these solutions will be focused on party-like settings, like Frito Lay's solution for Stacy's Pita Chips. In 2012 the company released a new package for this upscale product that added a flat bottom and re-sealable zipper to the traditional chip bag pouch. The new design turned the former stock-like package into a party bowl.

Perimeter Brand Packaging studied the consumer behavior of sharing and created Handout, a product designed to increase onshelf visibility and consumption of products like candy.

The Perimeter consumer insights team conducted a study of 1,000 consumers to understand the impact of the packaging on purchase intent and at-home usage, and found that consumers expected to consume up to 89 percent more from the out-to-share style package than the traditional bagged candy.

Consumers said they liked that the container could serve as a candy bowl, at home or at the workplace, where they liked the idea of leaving it out on their desk to share with co-workers.

Popcorn may be the quintessential out-to-share food product. Appropriately, Orville Redenbacher released a similar bowl concept in 2012 for its popular microwave popcorn line, Pop Up Bowl. To avoid a mess and the need for a secondary bowl, the new microwave packaging expands to form a bowl with a tear-off lid, allowing consumers to fight for the last few buttery pieces directly from the original package.

The new open-top also resolved the consumer pain point of getting their hands messy while reaching into the buttery container. The product earned the 2012 Product of the Year award in the snacks category from the Consumer Survey of Product Innovation.

The out-to-share trend is a big opportunity for flexible packaging, and the adoption can be seen in many aisles throughout the supermarket. In addition, products that were traditionally being thrown away or stored in the pantry are becoming staples in the kitchen or other frequently seen locations, leading to more opportunity to effectively interact with consumers throughout their consumption experience.

#### Speed-to-volume

Just as the fashion industry now addresses the trend of seasonality almost monthly, CPGs are under pressure to appeal more frequently and with innovation. Open innovation has flooded the industry with new ideas, all hoping to reach the desks of key decision makers in the largest CPGs around the world.

However, the products that move from concept to execution are those that are able to engage not only in one stage, but rather throughout the development, production and launch phases of a product lifecycle.

It's imperative to leverage research to validate consumer insight recommendations to increase market-ready capabilities. This can save money for all parties in the value chain.

#### Multi-purpose packaging

Product innovation will be a key driver of growth in 2013. Flexible packaging and folding cartons can drive innovation by expanding their purpose and becoming a functional aspect of a product.



In late 2011, Heinz launched the Dip & Squeeze ketchup package. The new product provides consumers with two ways to access the condiment – it peels back for dunking or the end can tear off for squeezing the product on to favorite foods.

In 2011 the product won the silver award from the DuPont Awards for Packaging Innovation by "capturing the spirit of innovation to resolve consumer challenges".

In 2012, the Flexible Packaging Association awarded Curwood Incorporated, a Bemis Company, a gold award for technical innovation in bringing the multi-purpose Heinz package to market.

Likewise, Perimeter Brand Packaging has developed a product called Freehand, a device that is designed to show a measurement of how much liquid is being poured while dispensing the liquid – eliminating the need for a measuring cup and increasing consumer interactivity.

In all cases, the core product being sold did not change it was the package functionality driven by consumer insights that delivered the innovation.

Studying consumer culture will always readily reveal packaging trends for the future. In 2013, packaging converters must focus on consumer insights to understand how ever-evolving behaviors will impact the industry.

Looking beyond 2013, packaging solutions must support innovation, and drive innovation through material selection and collaborative design. But most importantly, for success in 2013, validate your innovation with consumers prior to presenting them to the retail market.



## Package print success for KBA in Mexico



Mexican packaging printers have helped Koenig & Bauer to hit the ground running with its newest subsidiary in Latin America, writes James Quirk

ackaging printers have helped press manufacturer Koenig & Bauer (KBA) hit the ground running in Mexico through its newest subsidiary in Latin America, KBA Latina SAPI de CV.

Based in Mexico City, KBA Latina has 47 printing units in its order book for the first business year, with the country's package printers contributing to this total thanks to their investment in the Rapida platform.

KBA describes Latin America as an important emerging market, and says KBA Latina's performance in Mexico has made it the market leader in terms of installations.

'We plan to become the number one print industry supplier in the whole region,' says Stefan Deuster, manager of KBA Latina. 'We are a sound and financially healthy company, we are the technology leader, and we have a highly professional and experienced team. Those facts are reflected in customer confidence and represent the key to long-term success.'

Installations include two seven-color large format Rapida 145 presses, which have already been delivered and a forthcoming medium format Rapida 105. The latter, says the company, is attracting particular interest from smaller and midsized printers.

Mexican packaging printers that have

invested in KBA presses through KBA Latina include Graphic Packaging/Altivity in Queretaro, Smurfit Kappa in Mexico City and Aluprint in San Luis Potosi.

The 1,050 x 1,450mm (41.34 x 57in) Rapida 145, the latest generation of KBA's large format Rapida presses, runs at a maximum production speed of 17,000sph in straight printing with the high-speed package, and 15,000sph in perfecting mode with the new three-drum perfecting unit.

The medium format Rapida 105, launched by KBA in 2011, is based on the same technology platform as the Rapida 106. The machine's intelligent automation allows various configurations and optional features. It runs at a maximum production speed of 16,000sph, or 17,000sph with the HS speed enhancement package.

#### **Full-service provider**

KBA Latina is managed by Stefan Deuster, previously chief executive officer of Ferrostaal Mexico and manroland Latina. He is working alongside Mirko Straub and Sebastian Vogt, sales director and service manager of KBA Latina respectively.

The entire team currently comprises 17 employees, but is expected to grow in line with the company's sustained success.

KBA Latina is being positioned as a full-service provider to the print industry in

Mexico, as well as Venezuela, Colombia, Ecuador, Peru and Bolivia. Further sales and service companies are to be established in the region during the course of the year.

In partnership with agencies for prepress and finishing systems, KBA Latina is able to supply tailored equipment for all relevant production fields.

It will also place a heavy focus on delivering a valued local service network to guarantee optimum performance and productivity over the entire lifecycle of the high-tech presses installed.

This includes carrying out preventative press inspections, ensuring the availability of spare parts, providing continuous training for press operators and offering practical advice on consumables.

'Our customers in Mexico must receive exactly the same high quality of service as a KBA printer in Germany,' says service manager Sebastian Vogt.

Mirko Straub, sales director, adds: 'The international food, pharmaceuticals and cosmetics companies here – in other words our customers' clients – export their products all over the world from Mexico, with a large proportion going to the US.

'They must thus observe the highest international quality standards in respect of the packaging materials, which in turn places high technical demands on our presses and their availability.'

## ANALYSTS PAINT POSITIVE PICTURE

Printing industry experts and economic analysts are optimistic about growth in Latin America, as James Quirk reports



number of analysts are painting optimistic pictures both of progression in Latin America's packaging sectors, and in the region's economy as a whole.

A recent study produced by the Graphics of the Americas Expo & Conference (GOA) forecasts a positive state for the print industry in Latin America in 2013. Based on statistics reported by the IMF, the study reveals that the Latin America printing industry remained positive for most of the last decade, with a projected growth of four percent in 2013. The projected GDP in 2013 for Latin America and the Caribbean is 3.9 percent.

National economies that are driving the growth include (projected) Mexico (3.5 percent); Brazil (four percent); Chile (4.4 percent); Colombia (4.4 percent); Peru (5.8 percent); and Panama (7.5 percent).

The GOA study finds that "the most dynamic sectors of the Latin American printing industry have modernized technologically, and have maintained a significant investment capacity despite fluctuations in growth in the last ten years".

According to the study, the packaging segment has the best outlook within the printing industry.

Another survey, published by Conversión magazine in late 2012, shows sustained regional growth in all three major categories: flexible packaging, labels and folding cartons. The magazine surveyed 145 converters from 16 Latin American countries. The majority of respondents came from Argentina (11 percent), Chile (14), Colombia (25) and Mexico (22).

Nearly two-thirds of the surveyed converters reported increased sales in the first quarter of 2012 compared to the same period during the previous year, while 72 percent said sales had risen

by more than six percent; nearly half (47 percent) quoted a growth of 6-15 percent; while 12 percent saw a sales growth of more than 20 percent.

A third of respondents said profitability had increased in their local industry; 12 percent saw an increase in exports; and 26 percent said they were receiving higher prices for their products than the year before.

Furthermore, 49 percent have increased their production; 57 percent are consuming more materials than in the previous year; and 56 percent cited investment in new equipment as being among their principle growth strategies for 2012. Some 40 percent said they intended to go after value-added work in niche markets.

Reuters Breakingviews columnist Raul Gallegos, meanwhile, believes that Latin America can rely on its burgeoning middle class for the next phase of its economic growth.

With some 50 million people estimated by the World Bank to have been lifted out of poverty in the last decade, the region can count on an army of comparatively new consumers.

Despite modest GDP growth in Brazil, says Gallegos, consumers have been resilient. According to trade group Abrasce, sales at shopping centers may top US\$58 billion in 2012, the seventh consecutive annual increase, while a record 48 malls are expected to open in 2013.

Meanwhile Mexico, the region's second largest economy, at US\$1.2 trillion, is now the world's biggest soft-drink consumer. Wal-Mart is growing twice as fast there as in the US.

Though inflation remains a threat and the region isn't immune from slower growth in other parts of the world, Gallegos says: 'The underlying trends suggest a coming spark for foreign investment and local markets.'

#### PACKAGING PRODUCTION FORECAST

**TO GROW 2 PERCENT IN 2013** 

Packaging production in Brazil is set to grow by two percent in 2013 compared to last year, according to a study carried out by the Getúlio Vargas Foundation (FGV) and published by Abre, the Brazilian Packaging Association.

Manufacturers' revenue, measured by the value of the physical production of the packaging, will be some 48 billion Reais (US\$24.3 billion) this year, compared to 46.1 billion Reais (US\$23.3 billionn) last year.

The study says that production will rise by 2.5 percent in the first half of the year; for the second semester, projections vary from just over zero up to 1.5 percent. The annual forecast is for growth of between 1.5 percent and two percent.

#### **HI-CONE OPENS**

**FACTORY IN BRAZIL** 

Hi-Cone, a division of ITW which manufactures multi-pack packaging, has opened a factory in Cabreuva, in the state of Sao Paulo, Brazil.

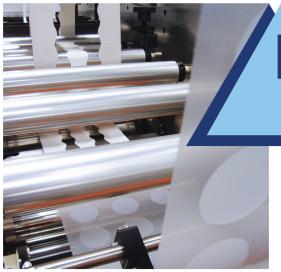
With a production capacity of five million ring carriers a year, it will serve the local market as well as the Mercosur region. The factory produces ring carriers for four, six, eight, ten, 12 or 16 packages. The multipack is made from connected plastic rings for transporting canned soft drinks or beer, and offers a substitute for shrink films.

According to Hi-Cone, the ring carrier has the advantage of reducing costs, using less material in production and negating the need for heat tunnels used in shrink-sleeve production.

#### GIDUE APPOINTS FOR LATIN AMERICAN DISTRIBUTORS

Gidue has added to its Latin American distribution and technical support network in Argentina (AGH) and Brazil (Gutenberg) with the addition of four new distributors: Sun Digital to cover Mexico and Central America; RTA Digital to take care of Venezuela and the Caribbean; Quimica Anderson to work in Peru and Ecuador; and Novaflex in Colombia. Gidue will now aim to grow these distributors into "service points" for local converters.

Adriano Melis, Gidue area manager for Latin America, will work closely with all these companies. 'We are very happy with the immediate acceptance of our products and our team by Latin American converters. Every visit shows new applications, interesting projects and a flourishing industry. It is easy to cooperate and this is the best way to give birth to innovative projects.'



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### Concentrate to succeed



Nicholas Mockett, of corporate finance house Moorgate Capital, discusses the drivers for merger and acquisition activity in the packaging market.

he industrial economics behind merger and acquisition (M&A) activity in the packaging market is primarily driven by the sector's concentration level, with lower levels offering a bigger opportunity to buy and sell.

#### **Five Forces**

The package printing and converting industries are less concentrated than the suppliers and buyers that sandwich them and, by applying some Porter's Five Forces mentality, you see that its relative power in the supply chain is weak.

Porter's Five Forces is an analysis and strategic development model that uses a framework featuring five elements that influence an industry's profitability and competitive intensity. The five forces are rivalry, the threat of substitutes and new entrants to the market, and supplier and buyer power.

As such, the high level of concentration and consolidation in those markets that supply package printing and converting businesses, and their customers, puts pressure on such packaging producing companies.

M&A and consolidation in an industry, such as those producing packaging, can help address this balance of power.

#### **Additional drivers**

There are other reasons for M&A activity, including a company growing its geographic footprint, extending technical know-how, acquiring complementary products or clientele, entering new segments or niches, and defending an existing position in the face of potential competition.

Furthermore, the availability of debt and equity drives M&A, and there are private equity funds with money to deploy.

Most segments of the packaging industry have very low industry concentration levels compared with other similar industries. The exceptions are glass and metal, which are more concentrated, probably reflecting the maturity of the product and the capital intensiveness of the process.

These types of product tend not to be heavily printed and form part of the label market supply chain, whereas flexible and fiber-based packaging are more integrated with print.

#### **Developed markets**

Depending on how you segment the packaging markets, plastic and paper-based packaging products offer the most potential for M&A activity, with the rigid plastic packaging and label sectors arguably the most fragmented.

There are many players in the developed markets and they will tend to come together to increase the packaging industry concentration.

#### **Emerging market opportunities**

There is also potential for those operating in highly developed packaging economies to move into high-growth emerging markets. Many emerging markets will see the value of their packaging markets accelerate at above the growth of GDP, with increased standards of living and changing demographics driving packaging demand.

If you are a multinational company, and you want to enter an emerging market, you may be able to go in with 100 percent ownership of a "Greenfield" operation, and launch an operation without an existing local presence. However, there are restrictions on foreign ownership in some countries, and finding a local partner in such areas is critical.

Multinationals often prefer to buy an existing operation rather than start from scratch. This can offer multiple benefits, including existing infrastructure, a skilled workforce, established suppliers and an existing customer base.

The benefit of the latter is that the buyer isn't left scratching around for sales, possibly at lower margins in light of defensive indigenous producers, while it sorts out plant teething problems.

As an example, MeadWestvaco's acquisition of Ruby Macons in India gave it a quick win in an emerging market, while RPC's acquisition of Superfos reinforced its position as the leading rigid plastics player in Europe and enhanced its injection molding credentials. Mayr-Melnhof has also made acquisitions in emerging markets, such as Plegacol in Colombia.

Competition law is also an important consideration in both developed and emerging markets, especially where the acquirer already has a presence, and where legislation and regulation is strong.

#### Selling and buying

The reasons for a company being put up for sale are varied.

From time to time, the shareholders of a business decide to sell. This may be a family which has built up a packaging empire where the next generation does not plan to continue, or it may be a financial sponsor or private equity house which has held a packaging asset for a period of time.

It may even be a multinational company that has seen its strategy evolve and a subsidiary become a non-core asset.

#### Ways to sell

Typically, these vendors will appoint an investment bank to identify the right home, often, but not always, the one willing to pay the highest price.

Many investment banks will adopt a scatter gun approach, where a bank puts together a document and broadcasts it to dozens of parties. In some case, this can result in the rationale for discussing the potential business combination being tenuous.

The suggested benefit of this approach is that the bank can tell the vendors that the company has been widely marketed and that the price received is market price. The risk is that the company becomes soiled goods. It's likely many competitors will have seen its trade secrets and it's also likely that customers and suppliers will have heard the gossip about the mooted sale and become nervous.

This can result in a price chip, or loss of value. It's also hugely embarrassing if the deal doesn't actually happen.

An alternative investment bank approach will capitalise on deep knowledge of the strategic value drivers for the industry players or buyer population and run a tight confidential process where the strategic fit is articulated to a select few to make it a compelling deal.

Those looking to find buyers or sellers should choose carefully which approach to adopt. Bankers who know an industry intimately, particularly over a period of years, are more likely to have the contacts and knowledge to originate the much coveted "off-market", exclusive deals, bringing the most compatible parties together, and negotiate the complexities of the deal without becoming distracted by "non issues" for packaging companies, which may be relevant in other industries.



## Information

The need to manage and process information across your business is of ever-growing importance to modern package printers, as software suppliers tell David Pittman.

rands are asking more and more from package printers, with shorter runs, more versions and faster times to market just some of the pressures that are being applied to printers and converters.

The ability to effectively manage the volume of

The ability to effectively manage the volume of information this modern business environment is producing is a big topic in the industry, and amongst the suppliers of the software that can be used to streamline processes.

Jan Ruysschaert, managing director of order lifecycle management specialist Hybrid Software, says: 'As run lengths are getting shorter, so orders are no longer arriving as one big job, instead being realized as smaller orders, still totaling the original overall volume, that require the input of repeat data.'

FFEI managing director Andy Cook talks about printers that have seen order values fall from £300,000 to a fraction of that, but conversely seen their overall turnover increase. He draws attention to the way packaging cycles have quickened from months to a matter of weeks, and even days in some cases, primarily impacted by the growth in digital printing. 'The supply chain is evolving,' says Cook, while EFI Radius product director Kevin Blakey says: 'The market is changing, and will continue to change, with high value, low order volumes becoming the norm.'

Willi Welsch, managing director of QBF, which develops the Aramis software, notes that this is coinciding with data entry remaining complex, and input forms getting longer and longer.

'This is not good, and often includes repeat information. Companies need flexibility in the way data is collated, as different processes and orders need different information, so to allow them to streamline their pre-press operations.'

Hybrid Software has developed systems to allow data to flow more seamlessly from the point of data entry, both into the production process, and back to customers.

Ruysschaert highlights Frontdesk, Proofscope and Facelift as three of the products Hybrid offers, for streamlining customer interactions, soft proofing and generating customized job tickets respectively.

Various other systems exist from software suppliers all over the world, like QBF's customizable Aramis and Sistrade's multilingual, web-based tools, to FFEI's recently-launched modular RealPro Toolkit product, but they all strive to achieve the same end result.

'At the core are time savings, error reduction and the reliability of information,' says Welsch.

'Customers want more and more automation, with clear visibility all the way through from ordering to being ready

to print,' says Paul Deane, joint managing director at Shuttleworth Business Systems.

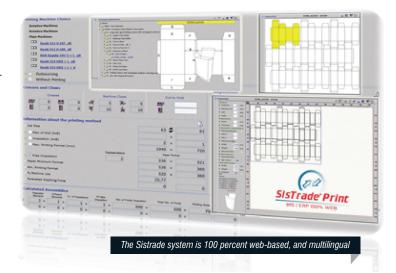
'It is all about greater automation of workflows to reduce the administration required to process work through the business. This reduces costs and improves speed of process. The greater visibility of all processes is an increasingly important requirement for a modern packaging business.'

Sistrade's Helder Martins, its printing and packaging solutions department manager, says: 'Nowadays, when people talk about ERP and MIS systems for the printing and packaging industry, everybody is expecting to have one single solution that can cover all different aspects of the industry, from the very beginning of the process until the last one; from the quotation of the job from the sales department, ending at the account department with all associated tasks.

'For all different steps in a company's hierarchy, there are always demands for new things that can face up to the constant evolution of the market; this is especially true in prepress, with customers' demands that everything should be easier and quicker without losing reliability starts here.'

'They want to have as much data as they can with the minimum input into the system leading to quicker processing of the information, with one very important aspect: never lose control of the needed information.'

Sistrade's software is fully web-based, available in 14 languages and designed to offer functionality from initial



the different departments of a business. Martins says that customers are actively looking for such functionality, plus software to suit the need, and want, for more information, 'with a simple click, without the need to have to compile information across different sources'.

Cook notes that: 'Many companies have trusted suppliers so we must be realistic that it's unlikely they'll change out their

## overload

ordering to human resources applications. 'We have thought about one single solution to fulfill all areas of a company,' says Martins.

He adds that Sistrade gets various requests from both existing customers and prospects throughout its different activities around the world, leading to its systems being continuously updated in terms of new functionalities and improvement of the existing ones.

FFEI's latest software, RealPro Toolkit has been designed from the opposite approach, and consists of more than a dozen modules designed to address specific pre-press workflow requirements, such as file editing and preparation, color management, trapping and step-and-repeat tasks. Features also extend to specialist tasks such as cylinder repeats, patterns and artwork pre-distortion. Modules are then placed at the relevant point in the workflow.

Shuttleworth has recently launched a mobile version of its CRM application, which gives customers the opportunity to log an enquiry on the road, and for that to feed automatically into the estimating system and, if needs be, pass the information through to the CAD software.

Shuttleworth is working closely with the major CAD vendors to build automation into these processes and provide a truly integrated solution for the customer.

Other vendors also speak of this need for integration to extend between different software products, not just between

whole system, so the systems must be able to work together.'

FFEI's RealPro Toolkit has been designed to integrate into existing workflows with this in mind, and is optimised for APPE-based solutions.

'Companies are moving to a "best-in-breed" mentality,' adds Blakey. 'The trend is to favor a particular system for a specific need, such as accounting, CRM, human resources, etc.

'However, they still want a fully functional system, so they're looking for software that is more open and allows integration. With its wide range of integrated products, EFI can offer a "best of both worlds", as well as integration to third-party products.'

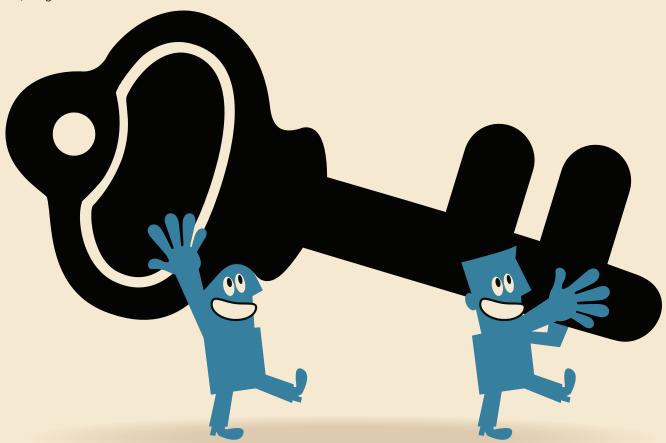
As such, Blakey likens the software market to a jigsaw, with the need for various parts to slot together to complete the information management picture.

'You can't offer a one-size-fits-all solution as the market expects systems to be flexible and workable,' says Blakey.

To this end, QBF works closely with Esko when developing its products, while Hybrid Software's Ruysschaert says: 'The market needs to be joining management systems together more effectively.

'MIS is pretty well refined, but administration systems are not so well developed, so are not communicating properly.'

'We work closely with customers to develop systems,'
Ruysschaert concludes. 'They are a good source of feedback
and ideas that allow developments to be made.'



## Packaging has a secure future



Printed packaging has a key role to play in the fight against counterfeiting. David Pittman reports

odern packaging has evolved to match the changing retail environment; from an initial means to protect a product during transport, to an essential tool in promotion and now the growing number of packs that offer a "performance" element once the consumer has taken the product home.

Take Tyler Packaging's "shaker" bag, with a perforated inner membrane for the dispersion of dry products like lawn seed, or one of the cartons from Leo Luxe Packaging that doubles as an ice bucket, as examples of packaging with enhanced functionality.

The three Ps of protection, promotion and performance have helped create packaging that is optimized to meet the needs of consumers, as well as provide brand owners with a means to maximize the potential of their products, with packaging designed, shaped and finished to emerge victorious at the "moment of truth".

#### **Packaging to protect**

Packaging as protection extends beyond the physical safety of the product, to brands and consumer products groups (CPGs) looking to uphold their reputations, and combat the black and grey markets for forged and diverted goods.

From visual elements such as typography and image layout, through to covert processes and finishes that allow the verification of a product's authenticity, suppliers have offered, and continue to develop, systems that provide the tools to combat forgeries and confirm authenticity.

'This is particularly important for products that are ingested,' says Stefan

Perlot, general manager of Securikett, which specialises in the development and delivery of brand protection systems.

Perlot draws attention to the deaths of 19 people in the Czech Republic from consuming counterfeit alcohol, and says the need for systems to authenticate products as legitimate is heightened when it comes to those from the pharmaceutical or beverage market.

'Consumers and brands are looking for simple and available tools to provide protection,' says Tesa Scribos international sales director Frank Waegner.

PrioSpot from Tesa Scribos gives each product an individually-generated code that can also be used for product tracing. This makes it possible to check both the authenticity and authorized distribution of the product. The item-unique code is inscribed on several different verification levels, from overt to covert requiring

special equipment to view, at the same time. A database of unique serial numbers is then available to be verified online by retailers, consumers, customs officials and investigators.

#### **Mobile authentication**

The ability for consumers to verify and authenticate products is a growing trend, as reported by Vandagraf International in its "Mobile Advertising/Promotions and Consumer enabled product Authentication with Smart Phones" report (see pp. 44-45), which states there is huge potential in consumer-enabled product authentication.

A number of suppliers in the security space already offer smartphone-enabled systems commercially, including some well-known to the packaging market and some new entrants. This includes Highcon and its Euclid digital cutting and creasing system for folding carton production.

This has been hailed as the "ultimate" in anti-counterfeiting by Glossop Cartons director Brian Sidebottom, with the ability to partially cut and crease elements using digital processes that are unable to be replicated on another system.

Glossop Cartons will be one of the first companies in the world to install a Highcon Euclid (see pp. 22-23), and Sidebottom has said the company plans to look at new ways to use the technology that have not yet been imagined, such as authentication.

Another supplier to the packaging market is AlpVision, with its Cryptoglyph system. Cryptoglyph is a security process that provides invisible marking with standard ink and using standard printing processes, such as offset, rotogravure and flexo. This means the system can be easily integrated into current packaging production lines, as the Cryptoglyph image file is embedded into the pre-press artwork, allowing converters to print at normal speed without any additional steps or breaks in the process.

Integration into the artwork origination stage also means Cryptoglyph does not have any meaningful impact on packaging as modulations in the surface coating and microholes, invisible to the naked eye and hard to distinguish under magnification, combine to provide authentication.

Packaging featuring Cryptoglyph is then authenticated using an iPhone installed with the company's app.

Dr Fred Jordan, AlpVision's chief executive officer and cofounder, has spoken in detail about the potential of mobile phones to provide instant and secure brand authentication.

He was part of a panel looking at this topic at the IP Protect Expo 2013, alongside Waegner and Jeremy Plimmer, secretarygeneral of the Product and Image Security Foundation.

This discussion noted that the rise in app-driven smartphones, such as Apple's iPhone, has given consumers the power, and the tools, to become more engaged with authentication. While overt protection using holograms is established, the ability for the process to be mimicked by counterfeiters has led some to question its effectiveness. Fully covert systems, such as taggants mixed into the ink formulation, allow professional bodies to authenticate, and track and trace products using special hardware.

App-based semi-covert systems bridge these systems, providing a more secure system that is not instantly visible.

They also allow for easier spot-checks by a brand's own brand protection team, who can visit a store and authenticate products without the need of special readers.

Jordan also notes the potential of SMS, or text messaging, as a rudimentary, yet fundamentally more accessible tool for consumers to authenticate products via mobile. This is particularly true in developing countries where smartphone

penetration is less extensive. Still checked against a secure database, text authentication then provides a means for rural emerging markets to make sure pharmaceuticals are genuine products, for example. However, while AlpVision's app does not require connectivity, SMS-based authentication does. Another drawback is that SMS authentication requires a unique code per item, which increases the cost of production and can be easily copied.

#### Integration with marketing

Many of these semi-overt authentication systems also act as a useful tool in opening up a dialog between brands and their customers.

Securikett's Codikett system, for instance, provides each product with a unique code that can be verified globally, and monitors the supply chain to allow traceability. This can be applied directly to the packaging, or with the addition of a security label. The tool also provides the opportunity for brands to expose customers to other collateral about the product, or associated products, as an addition to authentication.

Almost all other systems likewise present an opportunity for brands to engage further with consumers, and Tesa Scribos' Waegner says consumers now expect the availability of additional information, and are opening themselves up to a brand by authenticating a product, bringing the two closer together.

'Consumer awareness is growing,' says Waegner. 'But they are not the only target group for these tools, and there are many others in different positions in the distribution chain whose needs must be accounted for. Their involvement level depends on this position.

'These tools must also be robust and reliable, and be fully encrypted to ensure the validity of authentication.'

#### IP PROTECTION ON SHOW

Many leading names involved in dealing with and combating counterfeiting, and developing brand protection initiatives gathered at the recent IP Protect Expo 2013 in London to discuss the latest trends and happenings.

2013 was the second instalment of IP Protect Expo, with a 20 percent increase in visitor numbers, 500 participants and 45 exhibitors.

This included brand owners, official bodies and associations, and suppliers.

As well as an exhibition showcasing technologies, the two-day show included a seminar program that addressed key talking points from security packaging and the use of mobile applications in authentication, to the challenges posed by standardized packaging to IP protection in the key markets of China and India.

Speakers from government bodies and key companies related to these topics spoke to attendees, and held Q&A sessions to address specific questions, queries and comments raised.

Anti-Counterfeiting Group director-general Ruth Orchard said: 'IP Protect Expo is a groundbreaking event, bringing together stakeholders from all sides of the IP protection arena, and providing a forum for developing a truly global response to the challenges for IP rights holders. '

The IP Protect Expo will return in 2014 on March 11-12. Find out more about IP Protect Expo at http://www.ip-protectexpo.com



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## Packaging gets smart



As the world moves further and further online, the need for packaging to bridge the gap between the physical and digital worlds is becoming more and more important. **David Pittman reports** 

odern packaging is an important tool for brands in making the link between the online world and physical products. Thanks to smartphones and the booming market for tablet computers, from high-end Apple products to low-cost Android-powered alternatives, consumers have become more comfortable with the idea of living their lives online.

Although communication, networking, retailing and many other aspects of day-to-day life can now occur online, packaging remains a key component of the physical world, providing both a means to protect and promote a product.

Increasingly, packaging is also under pressure to perform, often providing further functionality when the consumer is in the home. This performance can range from fulfilling a use, such as an ice bucket in certain beverage applications, to providing qualitative information, as in the case of time-temperature indicators on fresh food.

The need to perform plays an integral part of the work in linking the physical and digital worlds also. Various systems exist to facilitate this relationship, from QR codes printed on packaging, to built-in near-field communication (NFC) and more visual augmented reality (AR) systems.

The basic principle of all these systems is to create an interaction between consumers and the online world, usually triggered by a smartphone, but each have their own benefits and uses.

#### **Augmented reality**

AR is often viewed as a more immersive system, displaying computer-generated visualizations over items from the physical

According to market research company TechNavio, the global AR market will grow at a compound annual growth rate of 54.3

percent over the period 2012-2016. One of the key factors contributing to this market growth is the increasing demand for an enhanced user experience.

Key vendors dominating this space are Layar, Metaio, Total Immersion and Wikitude, according to the TechNavio report, although there are many other vendors of AR platforms in the market, such as Blippar and Vuforia from Qualcomm.

HP's Aurasma is also on the market, and can be seen on special Kellogg's cereal boxes, on KFC takeaway packaging in Japan and through various other partners.

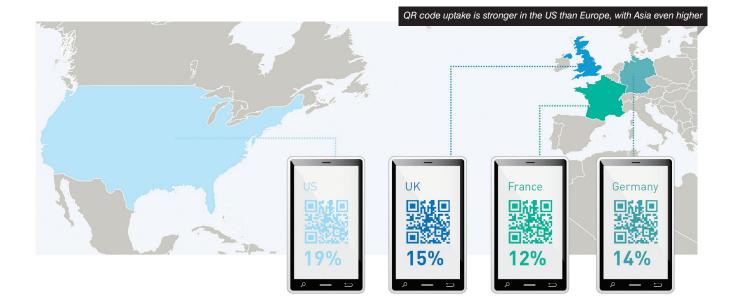
These case studies, and those of other vendors, are being used to promote AR, and help the market achieve the growth as predicted by TechNavio.

#### **Near-field communication**

Many commentators have said uptake of AR has not been as fast as had been initially predicted, but NFC is a process that has perhaps gained traction with consumers faster due to its more mainstream uses, such "wave and pay" for conducting low-value financial transactions by card and transport applications, like the Oyster card system deployed on the London Underground network. A growing number of mobile devices are also being shipped with out-of-the-box NFC compatibility, making access to the technology easier.

As with AR, NFC-enabled packaging is not widely used, but the ability to create automated interactions is similar. Smartphones equipped with NFC can be paired with NFC tags or stickers, which can be programmed by NFC apps to automate tasks, such as launching an app, sending a text, or the execution of a number of other commands.

Printing machinery manufacturer Heidelberg has been developing its Smart Shelf, which uses complementary electronic components embedded into packaging and on the shelf to create a link.



This has potential applications for stock management, but also to create cross-channel marketing opportunities, perhaps with nearby video screens coming to life when the link is broken by the consumer picking up the product, and being exposed to more information and promotional activities linked to the brand.

Heidelberg is also working with Printechnologics on Touchcode, a system to merge printed electronics into packaging.

Similar technologically to NFC, Touchcode is promoted as "paper goes digital", with an interaction started by consumers touching paper products, cartons, films or labels printed with a code onto the touchscreen of a mobile device on which the Touchcode software has been installed, which then launches additional video, audio or text-based content.

Norwegian printed electronics specialist Thinfilm has likewise been developing various technologies applicable to this market, include a proof-of-concept prototype of an integrated printed electronic tag based on rewritable memory.

The printed electronic label, consisting of printed memory, sensor and logic, detects that critical temperature thresholds have been exceeded and records data digitally for later retrieval and display.

Thinfilm's chief financial officer Torgrim Takle says such smart labels are needed to help grow uptake of NFC in packaging applications, and give consumers more information in a more intuitive manner.

#### **QR** codes

Probably the most recognized smart packaging tool are QR codes. These have been seen in circulation for a number of years, and are widely recognized by consumers as an access point to additional information.

Still requiring the installation of third-part apps in most cases, QR codes provide access to static content hosted on a website, preferably web-optimised due to the primary way people interact with them; via a mobile phone.

Takle notes that a downside to QR codes is the primary use of static content as a means to connect brands and consumers, but others don't see this as an issue.

'QR codes are perfectly suited to bridging the gap between the physical and digital worlds,' says Ryan Higginson, vicepresident, digital channel Europe at Pitney Bowes. 'They tick all the boxes for what needs to happen during an interaction. You can also change the static content at the source, without having to change the packaging.' There are good examples of where QR codes have been deployed. McDonald's has recently added QR codes to its packaging in North America, while food wholesaler 3663 uses QR codes to great effect on single servings of various products. These codes then link to additional dietary and nutritional information relating to each product, from dairy to salt.

'We're seeing traction for QR codes where space is at a premium on packaging, but further information needs to be provided,' says Higginson.

'Responsive packaging is needed, and QR codes offer that functionality. The number of smartphones in the market is growing, and they're always with you. This is helping drive uptake as more people scan have the ability to scan QR codes.

'We've seen strong growth in the UK, but uptake is twice as much in the US and even greater across Asia.'

Higginson notes that the position of QR codes is important, and the end-user experience is critical.

There are, unfortunately, a number of examples of QR codes being misused by directing to content not designed to be accessed on mobile devices. This is detrimental to the user experience, and can have a negative impact on the overall communication effort.

He says: 'QR codes were a fashion thing a little while ago so there were some failures, but now the understanding about their application to meet the needs of consumers and businesses is growing.

'They are well suited to small businesses looking to grow their position in the market. Small businesses are not multichannel operations, so need to capitalize on the opportunities they can utilize as multi-channel communication is important. QR codes open the doors to small enterprises.'

Pitney Bowes offers a product for small businesses to create a QR code system. The product, pbSmart Codes, includes the ability to create a mobile site and branded QR codes, and to track and analyse interactions created through a QR code.

The ability to analyse the relationship between a product and consumers via QR codes is important to Higginson, who says: 'For small companies, the ability to scrutinize analytics and see where the ROI is coming from allows better placement of marketing budgets.

'NFC carries a higher cost, whereas QR codes have a lower cost barrier to entry, and is the simplest way to compete with larger brands in offering an interaction to customers.

'We're seeing that it can work, and uptake is growing month by month.'

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# Making it in Milan

Converflex returns to Milan in early May, and promises to continue the upbeat mood of the converting and package printing industries, despite the continued economic struggles in Italy, across Europe and around the world.

argeted at the converting, package printing, labeling and tissue industries, Converflex has been playing host to suppliers and manufacturers from around the world for three decades. In 2009, the event welcomed 258 exhibitors and over 30,000 international visitors to Milan.

Despite the ongoing economic turmoil in Europe, especially Italy, the show's organizers are hopeful that 2013 will be full of 'innovation and proactivity', as the converting and package printing markets have maintained 'good energy levels'.

'The industries involved in this event, including the converting industry which is my company's business, have maintained good energy levels even during the current crisis,' says SIT Group chief executive officer and Converflex 2013 chairman Simona Michelotti.

'This proves that we are supported by solid bases capable of responding to the challenging scenario in a pragmatic, determined way. That is why we expect much from Converflex in terms of innovation and proactivity. The exhibition represents a not-to-miss global showcase for technology taking place at a crucial time, and can make the difference in the growth and development of Italian companies.'

The 10th edition of Converflex in 2013 will also be held in conjunction with Grafitalia, with the intention of increasing each other's catchment area and encapsulating technological evolution across a broader field.

The event will attract a number of key suppliers to these markets, as well as their distribution and sales channel partners, including Bobst Italia, Kodak, Rossini and Vetaphone.

Felice Rossini, owner of Rossini, says: 'Since the number of Italian companies participating in last year's Drupa has gone down, probably also due to the economic crisis, I expect the number of visitors to go up at the next Converflex as they are probably going to be curious about the latest market news.

'This has always been a successful exhibition and for many years it has been the choice of many leading companies in the converting, package printing and labeling industry. The event's renown is also well-rooted outside of Italy; this is proven by the statistics from past editions showing a strong international presence, in particular from Latin America and Asia.'

Marco Calcagni. sales director at Omet, says: 'Converflex provides a special opportunity for Omet, and for the Italian converting industry as a whole, to open up to Europe and to the entire Mediterranean Basin and North Africa in particular.'

2013 marks Omet's 50th anniversary, and at Converflex it will showcase its history, from 1963 to its position today in

Merobel has launched a range of EMP brakes, but will also show digital tension control and power supply options



the narrow and mid web printing industries. Omet will also take visitors to its premises in Lecco where they will be able to see a Varyflex V2, Xflex X6 and an Xflex X4, with a free shuttle bus operating from the show to Lecco, and back.

Michele Vitiello, managing director of Bobst Italia, adds: 'Converflex is a great showcase to keep up good relationships with our clients and show the wider public Bobst's ability to meet the production challenges companies are faced with.

'At Converflex we are going to illustrate the latest technology developments and the effectiveness of our solutions for printing and converting flexible materials, carton and corrugated products, as well as new service packages.'

At Converflex, Bobst will present machinery for carton converting in the form of the latest in sheet-fed equipment designed to increase productivity in customers' die-cutting, folding and gluing, and hot foil stamping processes. It will also talk about its equipment for the printing and converting of flexible materials, such as the Rotomec 4003MP gravure press, the F&K 20SIX platform of flexo presses and the General Registron Hawkeye pinhole detection system. Bobst Italia will additionally host an Open House event at the same time as Converflex, with shuttle buses running from the show to its San Giorgio Monferrato site.

#### Other suppliers and machinery manufacturers from across the supply chain to be at the show include:

- · Kodak, with both the Flexcel SR flexographic plates and Miraclon letterpress plates on show;
- · Pulse Roll Label Products, in support of its Italian distributor, Grafco. Pulse offers a full range of products for the narrow web label market including water-based and UV curable flexo inks, varnishes, adhesives and other speciality products;
- corona treatment specialist Vetaphone, with its series of treaters for both single and double-sided treatment and uniform treatment levels on both conductive and non-conductive substrates. All of its treaters can be combined with the new iCorona and iPlasma generators, which are designed to automate the treatment process;
- · fellow corona treatment specialist Ferrarini & Benelli, with atmospheric plasma treatment and corona treatment for labels. The FB Plasma 3D is composed of a high-frequency generator and a plasma nozzle, while the narrow web treatment station is equipped with ceramic electrodes for

treating conductive or non-conductive materials;

- · Enulec, which will show a new generation of ESA and electrostatic systems for use in conjunction with rotogravure presses:
- Erhardt + Leimer, with its ELTIM non-radiometric solution for surface thickness and basis weight measurement. ELTIM is a radiation-free solution based on ultrasonic technology for monitoring material thickness, weight and other relevant properties of a product during different production processes. The individual layer thickness is measured with an accuracy of 0.5-0.2 percent - even in combination with other substrates;
- · tension control specialist Merobel, a division of Redex, which has recently launched a new range of EMP brakes equipped with comprehensive cooling systems - a necessary component to achieve higher linear speeds;
- · Lamina, with its Blackline laminating machine and new crash-lock folding unit. Blackline is a highly accurate high-speed sheet-to-sheet, fully automatic laminating/ mounting machine that can handle most materials in the market, while the Crash Lock Gluer is equipped with a non-stop suction belt feeder and a variety of guides and belts to handle standard one-point glued boxes or three-point glued crash lock boxes;
- Vega, which will show its Mira 62-82-102 that it claims is the smallest folder gluer produced in Italy. Modular in design, the Mira allows for the future addition of systems like Braille functionality and an MBA module for aligning boxes;
- and Eberle, which will be showing its paper core production lines, off-line paper and plastic core cutters, and edgeboard production lines. This year it will place a particular focus on its latest technologies and developments in terms of spirally wound paper core production, paper core recutting and cardboard edge-protector production.

#### In addition, there are a handful of exhibitors at the colocated Grafitalia event of interest to the package printing market, including:

- Stora Enso, and its range of boards to suit a range of graphical end uses, single layer boards with a double silk coated surface on one or two sides;
- and Hybrid Software, which will be showing Proofscope and Proofscope Live.



Duran's Magnus series is for large formats of 170cm, 200cm, and 230cm

# Starting with



Turkey's Duran Machinery has gone from strength-to-strength since Drupa 2008, and already has plans up its sleeve for the years before Drupa 2016. Nick Coombes speaks to the company's sales and marketing director Pinar Kucukaras.

eading folder gluer manufacturer, Duran Machinery, continues to see strong growth in demand for its range of technologies for the carton and corrugated industries.

This successful period for the Istanbul-based company began back at Drupa 2008, with the launch of the then new modular Omega Allpro-S line, and was followed by the development of the Omega 145 specialty gluer for carton bags, and then the Omega Turnpro, which rotates the carton blank through 90 degrees.

In 2010, new developments included the Omega Braille embossing system and the Omega Allpro with ISRA PrintSTAR folder gluer with 100 percent inspection.

More recently, the company has launched the Omega Performa series of entry-level folder gluers, designed to offer economical handling of carton blanks. It is available in sizes from 80-165cm, and produces straight-line and four/six-corner boxes, as well as other designs such as inner partition, Z-fold, conical crash lock and CD boxes.

But, the latest development, and the company's "star at Drupa 2012" is the Omega Hi-Line series, a sophisticated range of high-speed folder gluers for top end production. In the short period since launch, it has become one of Duran's most popular machines, with various successful installations throughout Europe.

This brings to five the total number of standard folder gluer series available from Duran, varying in sizes from 350mm (14in) up to 2,300mm (98in), and in 20 different models, many of which are available with special modules and ancillary equipment. The ranges are the Omega Allpro, Hi-Line, Performa and Performa Plus, as well as the Magnus series, which covers the large format 170cm, 200cm, and 230cm sizes.

Speaking for Duran Machinery, sales and marketing director Pinar Kucukaras says: 'One of the secrets to our continued

success is speed of response to changes in customer demand.

'We are committed to design innovation, high quality manufacturing, and customer-oriented after sales service. If you combine this with competitive pricing and an extensive range of attractive machines, and it's not difficult to see why we have grown so fast.'

For Duran, Drupa 2012 topped out a period of global sales success, with the company delivering folder gluers to many of the leading international converters, many of which were existing customers returning with requests for more customized technology. Much of the company's innovation stems from contacts made at international trade fairs and exhibitions, according to Kucukaras, who sees them as prime opportunities for a free and frank two-way exchange of ideas. 'Feedback is very important, because it gives us a real-time feel of what the market is doing and in which direction our customers are moving – it allows us to steer our research and development more accurately and respond quickly.'

Following last year's successful showing in Düsseldorf, Duran has two exhibitions planned for 2013. At the inaugural CCE International show in Munich, held March 19-21, the company showed one of its best-selling and most versatile folder gluers, the Omega Allpro 165, which is designed to handle a range of stocks from carton to corrugated board, and can produce a variety of box styles.

Following CCE, and closer to home for Duran, is the Printtek exhibition being held at the Tüyap center in Istanbul. This six-day event, which runs from May 17, combines print and paper technology, and is uniquely located at the point where east meets west on the Europe/Asia frontier. Duran will exhibit an Omega Hi-Line 110 folder gluer, and will give an exhibition debut to its Omega carton bag machine (OCBM).

The OCBM marks a new departure for Duran about which Kucukaras is really excited.



# the finish

'We have developed the OCBM as a fully automated solution to produce carton bags, which has traditionally been a manual operation. The machine is designed to allow carton converters with standard printing and die-cutting technology to manufacture

#### Carrier bags.

'Our business partner in this specific field, Newlong Machine Works, which has been a leading company in the global paper bag machinery industry since 1960, will be on our stand at Printtek to help us deal with sales enquiries from Europe and Asia.'

According to Duran, the OCBM is the only specialist investment converters need to make to compete in both the volume and short- to medium-run luxury bags, and at a time when the global packaging market is being asked to adopt a more environment-friendly approach, the market for biodegradable paper carrier bags is a massive potential growth area.

The Tüyap fairground, where Printtek is being held, is close to the Duran factory, and the company is planning to welcome a raft of visitors to its showroom and demonstration facilities during the show. 'We will have an extensive range of equipment available for demonstrating different types of work, and the opportunity to discuss converters' special requirements with our sales and technical support staff,' said Kucukaras. 'May is the most beautiful month to be in Istanbul, so we are hoping that many people will come and enjoy our city.'

With the Turkish domestic market showing real signs of growth after a

period of stagnation, Duran Machinery is well set to satisfy the converting market with its extensive range of standard and specialist machinery. But it is the international scene, where the global brand owners play, that attracts the company, and Kucukaras is confident that the company can build its market share stronger among these leading carton and corrugated converters.



## Mobile world offers new opportunities for package printers



Mike Fairley reviews a recent report that analyzes the dramatic changes and opportunities that smartphones and interactive technologies are now bringing to the producers of labels and packaging, and brand owners.



and retail groups spend huge amounts of money each year to try and gain the attention and favor of consumers. They are certainly always looking for novelty, freshness and a new interest, as well as ways to differentiate themselves from the competition.

Yet traditional marketing methods have become tired and uninteresting. Consumers perhaps become bored and switch off. Moreover the traditional marketing and advertising spaces have become more and more "cluttered", with each message jostling to be noticed above the noise.

The same is often true of the brand owner's labels and printed packaging - and the printers and converters that produce this material.

So what do brand owners, label and package printers, industry suppliers, retail groups and designers need to do in today's world of mobile phones, the internet and social networking?

Vandagraf International's new techno-economic market report, entitled "Mobile Advertising/Promotions and Consumer enabled product Authentication with Smart Phones", provides some analysis of the new and occasionally bewildering world of mobile marketing, and how it provides new opportunities for label printing and packaging suppliers.

It contains information on the technological changes that are occurring - ranging through two dimensional and QR codes,

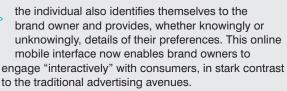
matters - as well as discussing the significant convergences that are set to impact many industries and businesses.

The report explains that to attract and hold the attention of consumers today, the modern advertising message needs to be much better conceived, more imaginative and innovative, and more entertaining. It also needs to be more engaging and

The internet, it says, has undoubtedly changed the game and presented a wonderful world of new opportunities for brand owners to present their wares in new ways. Indeed, it is already a given that brand owner websites are well conceived navigable, informative and attractive. So marketers cannot resist and more needs to be done.

The online mobile world outlined in the report's pages offers new platforms to be highly innovative and to differentiate a brand from the competition, as well as offering a whole new raft of ways to grab the consumer's attention and crucially to engage with the consumer interactively. The promise of being able to offer unlimited "additional content" online - that may be dynamic as well as static - is simply a sensational opportunity for brand owners and marketers.

But even this is just the start of the journey, as the report explains, because once the consumer is engaged



This allows the brand owner to follow up with individual prospects and/or refine their marketing efforts and campaigns to better target niche markets. The icing on the cake is that social networks then come in to play, further spreading the word about the brand owner's product – and even with a bit of luck the campaign can go viral

#### Consumer-enabled product authentication

Quite distinct from mobile marketing opportunities, there is also big potential in the concept of consumer-enabled product authentication that is now also gathering momentum rapidly. A number of companies operating in the security space are already offering smartphone-enabled systems commercially, including some well-known label converters and we can expect to see more happening in this arena.

Confronting the ever-growing menace of counterfeit branded products has largely been left to law enforcement authorities who have often been overwhelmed up until now. With the meteoric growth of smartphones, millions of consumers will soon have the possibility to check the authenticity of branded products at the point-of-sale before they purchase. The implications of this may also prove to be far reaching.

So what does all this mean for the label converter and package printer? Combining print with an Internet experience delivered through a smartphone interface, the report states, is a very fast growing trend. To survive, packaging and label printers must evolve and adapt quickly and pro-actively; the worst option is to dig in and resist.

The label and package printer that both understands and can manage the complexities and newness of the digital world will in effect become a "preferred" partner in the process of product and brand enhancement rather than an "also ran" supplier of printed packaging and labels.

The printers and converters that now take the time to study the new digital technologies and to build up an in-depth understanding of how these smart systems operate and fit together will reap the rewards.

Having a strong understanding of the tricks of the trade, and the ability to discuss and explain the relative merits of these technologies and share their knowledge with brand owners, will come to represent a significant competitive advantage.

Enlightened label and package converters and printers, the report continues, is likely to find favor with brand owner customers when it comes to choosing partners and suppliers for future cooperation.

There seems little doubt that substantial benefits can be derived by brand owners and marketers by means of mobile interaction that: starts with reaching out to a mobile audience; moves on to an interactive engagement with customers; enables a high degree of one-to-one targeting to be achieved; offers effectiveness of results that can then be measured; provides data that can be managed, sliced and diced and analysed; provides customers with a connection through to physical as well as online content; and gives response rates to printed material that can be increased significantly.

As with many facets of modern life, technology is at the heart of this label and package printing industry-wide change that is taking place.

As smartphones and tablets are rapidly becoming the norm, so consumers have increased access to additional content, and the option to consume and create it in a number of different ways.

All this, explains Vandagraf International, means that the package printing and label converting industries are faced with an array of internet and technology related issues, but is undoubtedly better placed to adapt and survive than, say, the general printing industry.

Although the online world has a lot to offer in terms of enhanced marketing communications and product authentication, the internet can never compete in fulfilling the basic functions of packaging and labelling in areas such as product containment, product identification, shelf-appeal and product protection.

According to some of the background statistics of the report, annual smartphone handset sales were 450 million in 2011, and are forecast to grow annually at 30 percent to 1.65 billion in 2016.

Global advertising industry sales weighed in at around US\$450 billion in 2011. Mobile advertising expenditure was estimated at around US\$4.5 billion in 2011 – one percent of the total – and is forecast to grow to some US\$29 billion in 2016.

The generally well established and traditional label and package printing industries have never seen growth rates of this order, and in some cases are perhaps even reeling in shock.

So what are the implications and technologies that label and package printers need to understand?

As far as the report identifies, the major types of mobile action code technologies are: printed 2D/QR code systems, other smart phone enabled systems with printed codes, digital watermarks embedded in print, other non-printed smartphone enabled systems, self-authenticating systems, embedded devices like NFC, and hardware devices.

What seems clear after reading the Vandagraf study is that the historically traditional style label and package printing industries should be responding much more proactively to these changing technologies and brand owner requirements, and assimilate and embrace the new world of mobile technologies in order to survive.

As the report points out that those companies that do this well are set to prosper in the future, while those that are slow to respond may well pay a heavy price for their inertia.

The Vandagraf International report, "Mobile Advertising/ Promotions and Consumer enabled product Authentication with Smart Phones", is available to buy from the Labels & Labeling Bookshop or by visiting http://tinyurl.com/vandagraf. It is priced at US\$4,850 (€3,707.83).



Müller Martini VSOP Variable Sleeve Offset Printing



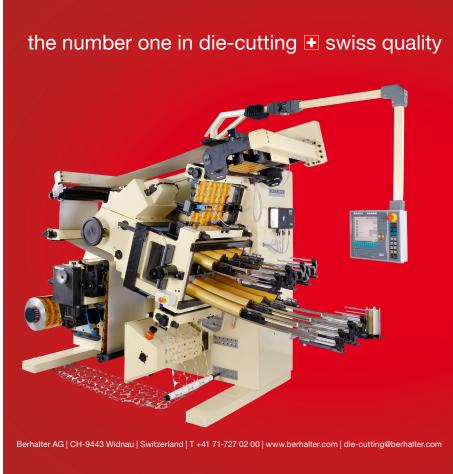
The technology of the VSOP web offset press provides the capability to take advantage of many market trends in packaging: flexible packaging, labels (shrink sleeve, self-adhesive labels, wet glue labels, IML, wrap-around), folding carton and liquid packaging. The press runs up to 365 m/min (1200 ft/min) and produces the complete size range (381-762 mm/15-30") by using lightweight print sleeves. The VSOP is available in web widths of 520 mm (20 1/2") and 850 mm (33 1/2") and offers a great number of hybrid configurations with flexo, gravure, screen etc.

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**MÜLLER MARTINI** 







# Confectionery packaging all wrapped up

Recycled cartonboard and compostable film helped Fair Trade alliance Alce Nero produce a more environmentally-friendly package for its chocolate.

hen an Italian consortium of organic producers and farmers looked to introduce more environmentally-friendly packaging, it called on Swiss converter Fratelli Roda to provide the answer. Alce Nero, part of Alce Nero Mielizia SpA, and its members share a common ethos for regionality, innovation and the environment. The choice to farm organically has characterized the organization since its inception in 1978. Today, it represents farmers, beekeepers and Fair Trade producers.

Its chocolate bars are made with cocoa from plants grown in Costa Rica by partner organization Cooperativas Sin Fronteras, a network of small Fair Trade producers in the South American country. Once harvested, the beans are roasted and made into the finis hed product by Chocolate Stella of Switzerland's Chocolate Bernrain Group.

Fratelli Roda works extensively with the confectionery market, especially with those supplying chocolate, but also those specialized in the high-quality sweet and savory markets.

For the outer packaging of the Alce Nero chocolate bars, Fratelli Roda, which is an FSC-certified operation, used a recycled carton material called GD2, which gives a secondary use to carton waste.

To manufacture GD2, Fratelli Roda recycles 99 percent of its carton waste, revaluing it and finding applications for it.

The recycled carton was then printed using offset and coupled with a UV varnish suited for food packaging. Embossing was also used on the Alce Nero logo.

To meet the requirements of the food sector, Fratelli Roda works within the hazard analysis and critical control points (HACCP) management system, in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product.

Luisa Colombo Crivelli, marketing manager at Fratelli Roda said: 'From a printing point of view, confectionery market players often request packaging with special effects, like embossing, special varnishes, and the use of gold or silver colors to embellish their packaging.

'From a technical point of view the company needs to be certified to print for companies working in the food sector; we follow the HACCP system of control.'

Within the recycled carton outer sleeve, the chocolate is wrapped in Innovia Films' compostable NatureFlex material to further reduce its environmental footprint.

NatureFlex films are certified to meet the American ASTM D6400, European EN13432 and Australian AS4736 standards for compostable packaging. Produced from wood-pulp that is sourced from managed plantations, the bio-based content of NatureFlex films is typically 95 percent by weight of material according to ASTM D6866.

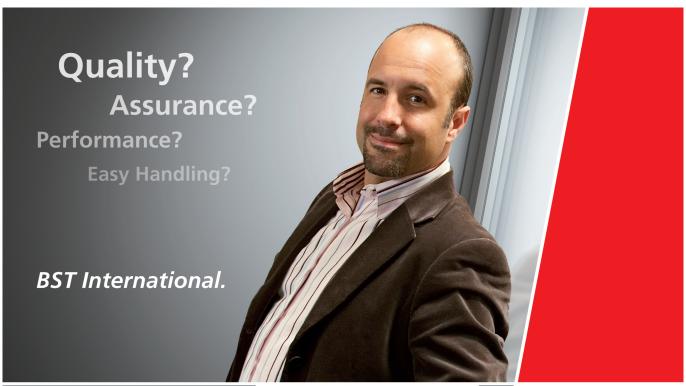
NatureFlex films have inherent deadfold and anti-static properties, high-gloss and resistance to grease and oil, good barrier to gases, aromas and mineral oils and a wide heat-seal range, according to Innovia Films.

Nicoletta Maffini, marketing manager at Alce Nero, said: 'We decided to move from standard plastic to a biodegradable and compostable alternative to wrap our chocolate bars.

'Metallized NatureFlex from Innovia Films was a perfect fit for us due not only to its environmental attributes but also its excellent barrier properties to keep our organic Fair Trade chocolate in premium condition.'

Giorgio Berton, technical services and development specialist at Innovia Films, said: 'Our metallized NatureFlex film is used to good by Alce Nero as it fits in with their brand image, protects the product and is compostable.'

Crivelli added: 'Everything we produce we try to do in a way that minimizes the negative impact on the environment.'



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#### Solvent-Free, High Speed Processing

There are high costs associated with solvent processing: the equipment, specialised air-conditioning & extraction and solvent recovery. Whilst there have indeed been alternative technologies available, quality has been a significant issue, until now. Dantex's Aquaflex plate range is achieving a print quality in flexible packaging that is successfully challenging all other current options. Consider the immediate and long-term impact on the environment the elimination of solvents and the introduction of high speed processing will have; a high quality, cleaner and greener solution for the Flexographic Printing Industry.





# PDF standardization to streamline packaging



Christian Blaise, founder of bleuprocess and co-chairman of the Ghent Workgroup packaging sub-committee, details the importance standardizing PDF specifications in streamlining packaging workflow



he packaging workflow is very complex, involving a lot of internal and external contributors with different goals in a short time.

To streamline this workflow, there is a strong need for standardization to help in the different uses of PDF files throughout the workflow.

The Ghent Workgroup (GWG) packaging subcommittee has been working for more than 10 years on such specifications and best practices for the packaging PDF workflow.

GWG is working on specifying the way PDF files must be generated to avoid technical problems, and on standardizing elements – layer content and layer names – of the PDF file to reduce work, increase security and open workflow automation.

In the packaging workflow, production files are usually made of layers, which can isolate different content to ease the use of the file in production, whether using Adobe Illustrator, InDesign, ArtPro, etc., to access the file, as well as for the validation process.

There are three main types of optional content: the optional content group (OCG), which mirrors more or less the layers that are used in the authoring tools; the optional content configuration directory (OCCD), which are combinations of OCGs that refer to a usage type or role; and the optional content membership directory (OCMD), which is a combination of both OCGs and OCCDs, and the algorithm to show the contents.

Packaging PDF files regularly use OCGs in their construction because they are easy to generate from the authoring tools, and users can isolate elements by making visible or not those "layers" in the viewing software.

While this is useful during display, especially during the validation process, there is room for improvement to streamline this part of the process.

With the OCCD, it is then possible to only show or print the relevant content in a specific context, such as printing the English or French version of a document, proofing the document with the die-line visible, making plates of colored only separations without die-line and embossing, etc.

By using OCCD, it is easy to only show the relevant content to a contributor in the validation process, which helps its validation task. For example, the French marketer will only see the document in their language, and with only a finished colorful image of the package, as opposed to the packaging technologist, who will see, from the same source document, all of the technical information.

The OCMD is the most advanced technology because it can virtually reduce the number of OCCDs that are needed to show all the combinations required to fulfill all specific cases of a file in the production workflow, but it is not used for the moment due to a lack of tools in the authoring part of the workflow; basically, it is almost impossible to generate a PDF file made of OCMDs.

As we can see, PDF files contain elements that are meant to be printed, as well as elements needed to generate post-printing tools, such as embossing or braille, and non-process elements for validation or information.

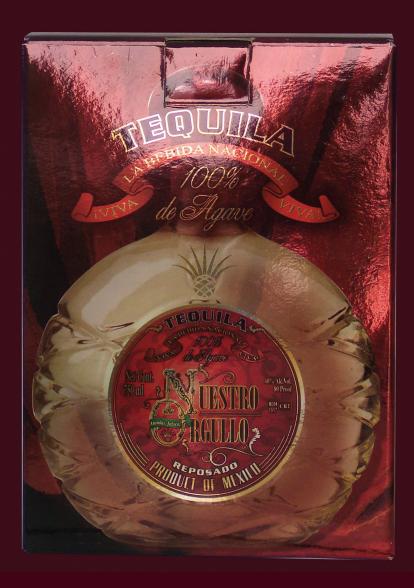
While it is relatively easy to show or hide some of the content manually, based on the optional contents, automating this task is more of a challenge because automation tools can only work with well-defined rules.

GWG has worked on a specification for the "non-printing contours" in PDFs to define all kinds of content which is not printed but present in the PDF file, based on a dictionary, language-independent. The use of a dictionary is the only way to get rid of local naming of objects ("dieline" versus "découpe" for example), and opens the way to automation, which leads to less work and more security in the workflow.

All of these concepts are ready to use in production (and some of them are already used on a regular basis), but the complete workflow described above is not there yet.

This is where the vendors have an important role in implementing those technologies and standards in their software to offer the market a global streamlined automated process for packaging workflows.





When printing on metallized cardboard, glitter and matte areas can be controlled to create interesting three-dimensional effects; applying white matte ink before the colors eliminates shine

## Designed to succeed

The packaging design community tells David Pittman about its relationship with printers and converters, and how this is central to breeding creativity and innovation, and getting new products to market.

or the global packaging design community, the relationship between it and the printing and converting industry is integral to getting packaging from the drawing board to the shelf.

Guillermo Dufranc, of Argentinian graphic and

Guillermo Dufranc, of Argentinian graphic and structural packaging design house Tridimage, says: 'The relationship between designers and converters is inevitable. We need each other.

'Every design process should start with as much information as possible regarding the technological process. It has vital importance since the client expects to get what they have seen on the screen or, preferably, in a mock-up. There are many details that can't be displayed in a sample and you will only obtain them in the final production.

'A fluid communication between designers and converters guarantees that the final product meets or, even exceeds, expectations.'

For Kevin McConkey, co-founder of Grip Design in the US, the relationship is symbiotic. 'They are the ones that are purchasing the latest technologies, so are the ones that know what it can do. By working closely together we know what can be achieved, rather than designing something that is then forced upon them.

'This works both ways as having designers question their technology allows to uncover new applications that can be achieved with it.'

'As the starting point in the creation of a successful product, design has to work together with the printer's resources, with their innovations and substrate materials, technical knowledge and partnerships to improve artwork to benefit the result, product, client and consumer,' says graphic designer Fidel Anaya, of Mexico's Anaya Graphic.

'We have to be close to them, so we can understand their capacity, have a fluent dialog with salesmen, fit to budgets.

'You can't design without knowing the resources you count on to give wings to your design, and if you don't know the equipment you can hardly understand the importance of what you are doing. If you bake you must know the oven. By knowing the processes and equipment, you will be able to design successful packages using all the resources offered. With every visit to a pressroom, we get experience from their technicians and how they take advantage of their equipment.'

Pressrooms are a useful training ground for Ken Du of China's Graphic Solutions, who says: 'If I hire a new designer who does not have any knowledge on printing processes, I will send them to a pressroom for training.'

Cornerstone Strategic Branding's Keith Steimel, chief creative officer of the American firm, outlines how it take several factors into consideration from the start of the design process, including the print methodology, substrate, number of colors to be used, the printing of multiple SKUs in combination on a single sheet and need for artwork to print at various printers, possibly using different methods.

He says: 'By taking these factors into consideration early on, we can ensure that we create designs that will work across all processes and platforms. Since many of our clients use multiple printers, we take a look at the strengths and weaknesses of each of them and take those factors into consideration so that we can put our best foot forward.

'By considering the technical aspects in the concept stage, it also allows us to develop creative solutions for technical issues that are inherent in every project.

'For example, building in traps and considering the impact on the design instead of having a converter apply them when they get the files. By considering all factors from the beginning, we avoid any surprises and retain control of the final look of the printed piece.'

Du says: 'Artwork design is very important for every further process, from printing, die-cutting, folding and gluing. A small mistake at the design stage will cause big issues, such as material waste and make-ready times.

'When a designer is preparing an artwork, a printer's specification is very helpful. From the design agency, to printers and convertors, good communication will improve both efficiency and quality.'

Dufranc adds: 'We always, and I mean always, contact packaging printers and converters before designing. The first step of a creative process is to know what the printing technology is and also the possibilities and constraints as well.

'Designs should be conceived according to the printing process. This is the only way to get what we have imagined and what we expect to see printed. Designers are meant to prefigure packaging designs, and converters are the ones who will bring them to reality. Both tasks are equally important and we need to work closely together in every production stage; from the beginning at the pre-press floor to when overseeing the first run.'

Other players in the supply chain are likewise as important to the design community, although they may not interact directly. Du says Graphic Solutions utilizes the relationship printers and converters have directly with their supplier partners to stay abreast of the latest happenings across the supply chain, as does Anaya Graphics.

Fidel Anaya says: 'With material suppliers we get in touch through the printers' salesmen, as knowing innovations allow us to be original and use those resources first to create outstanding package designs.'

'We collaborate with clients when they need to choose the material that best fits the product,' says Dufranc. 'At Tridimage, we create structural and graphic design, so substrates and materials are the pillars of our projects. Being constantly updated with the latest innovations propels our work while enabling suppliers to add more value to their products.'

Keith Stetler of Stephen Gould Corporation, adds: 'It is very important to keep up on all of the new paperboards introduced, as well as flexible substrates. The structure of the package is very important. If you make a mis-step, and choose the wrong material for the structure, all of the beautiful artwork won't correct this. It is also important to understand the different effects specific flexible materials and paperboard will have in conjunction with inks and graphic designs.'

The relationship with suppliers of finishes is also important to designers, even if, again, it's not a direct partnership.

Dufranc says: 'Finishes such as foils, UV gloss spot, embossing, glitter or metallic inks are the most magical part of any packaging design.

'We tell the client how wonderful the result will be and we all long to see it implemented. We generally see how these amazing products change the whole brand perception when they are finally printed. In this case it is important to be constantly updated with the latest technologies and trends to give that special aura to the brand and make more desirable and valuable packaging. Moreover, finishes raise quality perceptions and can justify price increases without losing credibility.'

McConkey says: 'This gives us insight on the latest happenings, and a lot has changed in the market in recent years. Textures and structures have come out that we need to know about.'

Stetler says: 'I rely heavily on the printers I have established very long standing relationships with to keep abreast of all of the new ink products and quality of the products. I will work closely with my printer to make decisions on what new innovations to present for specific packaging requirements.'

One of the benefits of sharing such knowledge is to create a design that can be fed seamlessly into the package printing process.

For Anaya this is a fluid process as, 'we know the resources and how to prepare the artwork for them.'

'We do our best to make our designs fit the processes,' adds Du. 'When the design is finished and sent to the printer, they get it and work immediately without any additional adjustment and fixing.'

McConkey says Grip creates artwork files that are easy to understand and action by the printer, and proactively works to "second-guess" any questions that might be asked, and streamline the link between design and print.

For Stetler, it is important that the structural design, as well as the graphics, fit into the workflow process of printers and converters. 'This will have a direct impact on the cost of the final product, and cost can make or break the success of the design work in respect of getting the order to run the package.

'We have come a long way from the days of design, to sample, to approval, to vinyl die lines, to laying out artwork, to producing hard copy proofs, to sign off, to making negatives, to burning plates, to printing,' he says.

'The software (see pp. 32-33 for the latest on the MIS/prepress market) in the last 10-15 years has made the entire process almost seamless in comparison.

'Digital files, die lines, proofs and going direct to plate has cut a tremendous amount of time and energy from the workflow, and reduced the possibility of mishaps to a minimum.'





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# Producing the perfect prototype

As the need for brands to be more responsive and get products to market quicker grows, so prototyping is becoming an important element of the packaging cycle. Technology suppliers Roland DG and Fujifilm share their thoughts.

rototyping is important to the packaging market for numerous reasons: it allows the visualization of products in 3D; small volumes can be viewed in a retail environment; and it permits limited-scale test marketing prior to full-scale production and wider distribution.

A number of suppliers from the pre-press environment, as well as press manufacturers, have spotted this growth and launched systems and services to suit, primarily using digital technology.

Esko offers Store Visualizer as a software tool that permits the visualization of packaging in a virtual retail environment, while CGS Oris and GMG Color color management systems enable mock-ups and prototypes to closely reflect the real-life appearance of packaging produced on production presses.

Hardware vendors such as Fujifilm and Roland DG offer presses that take graphics produced using such software and produce real-life prototypes.

'The overarching requirement for a prototype package is that it should look and feel like a professionally made, volume produced pack,' says John Harper Smith, marketing manager for industrial at Fujifilm. 'This will be the case whether the prototype is designed as an example of a longer run, is intended for test marketing, or is destined for specialist low volume sales.

'In the case where the prototype will subsequently be printed in volume using conventional equipment, it is also important that the visual appearance of the prototype is completely consistent with volume production.'

With this in mind, Harper Smith notes key requirements of prototyping as being: print ideally conforming to the offset standard ISO 12647 to suit the critical element of color matching; embellishments, such as varnish or white, to be used where appropriate, especially if to feature on the final pack; and the overall appearance, such as surface finish, being both appropriate for the intended market and consistent with any subsequent high volume production process that is envisaged.

GMG and Roland DG have a worldwide partnership for producing color-accurate mock-ups on production substrates. This partnership encompasses the development of printer drivers by GMG for the inkjet printer/cutters from Roland, such as the VersaUV LEC-330 and LEC-540. The LEC series prints on a wide variety of substrates, such as paper, film and leather, in addition to card stock, plastic board, polycarbonate and others.

Last year CGS Publishing Technologies launched the new ORIS Flex Pack // Web solution, which includes ORIS software and Roland DG's VersaCAMM VS series of printer/cutters. This was exclusively developed by CGS as an on-demand alternative to legacy systems for packaging proofing. This solution for flexible packaging proofing and mock-up production delivers huge savings on consumables and provides contract quality proofs.

Steve Chappell, business manager for packaging and proofing at Roland DG (UK) says: 'Older versions of package prototyping and color proofing technology were too far off the final appearance to be effective in producing mock-ups and proofs. Now, thanks to systems such as CGS ORIS Flex Pack, almost all Pantone colors can be reproduced to contract-quality proofing standards delivering almost perfect halftone or contone proofs and prototypes for any kind of flexible packaging.

'There is definitely a strong need for creating prototypes using inkjet technology. A finished mock-up can be created within a few hours, without stopping a press. It is a clean system and can be operated in-house making it possible to react incredibly quickly to your customer's demands.

'It really is simple to create a low-cost mock-up and you can let your creativity can run wild with the use of special effects including metallic and white ink.

'For brand owners and design agencies, the technology is a great way to streamline processes. Brands are spending huge sums on mock-ups when our cost is massively reduced compared to wet proofs,' concludes Chappell.

Fujifilm's Acuity 1600 LED printer offers similar productivity in terms of inkjet printing with a wide color gamut and smooth tonal gradations, and the flexibility to print to a broad range of media up to 13mm thick. The UK's Glossop Cartons (see pp. 22-23) is one such company that utilizes the Acuity to produce prototype packaging, and director Jacky Sidebottom says it has proved a success to the company.

Harper Smith says: 'In the packaging market, short-run prototypes have traditionally been produced using largely the same equipment as that used for full scale production.

'This is clearly an expensive process and cannot cope efficiently with multiple versions or last minute design changes. Digital printing greatly eases this process as it eliminates the up-front plate production and set up costs.

'The increased efficiency of prototype production combined with possibility of offering a number of variations and last minute design changes is a significant change to the packaging market. It has allowed cost-effective production of the prototypes needed by the industry to help visualize and sell its products."

He adds that the ability to produce hyper-short runs is also of benefit to "cottage industry" products, which are manufactured by relatively small businesses such as local food producers where the ability to present their products in professional packs allows them to be sold to, and sold by, some major retailers.

'There is some excellent software that allows 3D visualization of finished packs in both individual and palletised form, and can additionally allow accurate display on a virtual retail store. However, although this is very good, some brands and retailers want to see physical examples of a pack if, for example, they are deciding whether or not to stock a particular product. In addition, they may want to test market a product in selected stores to gauge customer reaction to both pack and product, something that a virtual product can clearly not do.

'Conventional printing and finishing techniques make prototype production a costly and time consuming process. Digital printing allows economic production of both samples and small volumes needed for initial retail distribution and has therefore eased production pressures for large volume printers who have invested in digital technology.'

Harper Smith adds: 'Systems such as the Fujifilm Acuity 1600 LED printer lend themselves very well to the production of short-run prototype packaging as they combine all of the desirable features.'



## Streamlined sourcing

German industrial flexible packaging firm Nordfolien has benefitted from acquiring ink, plates, sleeves and adapters for flexographic printing from a single source.

erman flexible packaging specialist Nordfolien was founded in 1966 in Steinfeld (Oldenburg), Germany, as Nordenia Kunststoffe Peter Mager KG. In the 1980s the first subsidiaries were founded, and the company expanded into the US and China. In 1999, a new plant was constructed in Zdzieszowice, Poland.

Fast-forward to 2003, and the German and Polish operations were renamed respectively Nordfolien GmbH, Steinfeld and Nordfolien Polska. Today a workforce of 350 people contribute to an annual turnover of approximately €130 million.

Nordfolien services a wide customer base across the world in sectors including the chemical and food industries, animal feed producers, construction and industrial processing. Particular attention is paid to the functionality of the packaging and to its compatibility with customers' packaging machinery.

The company's extensive product range is manufactured on state-of-the-art extrusion equipment. The portfolio comprises side-gusseted and flat bags, as well as stretch film. Specialty products include the MaxiPouch, with a stand-up bottom and carry handle, and the NordiPURE bag-in-bag, which is supplied

ready-to-use on rolls. These high-tech packaging solutions are used primarily for food and primary pharmaceutical products, as well as in the hygiene sector.

The latest additions include a sevenlayer co-extrusion film which provides a barrier not only against oxygen and gases, but also against water vapor, fats, flavor and light. The new film has applications particularly in the food and chemical industries.

#### Partnership

A key part of Nordfolien's success has been its partnership with Flint Group, which takes in a wide range of products from printing inks and plates, to sleeves and adapters.

Flint's FlexiStar inks are designed for surface printing on polyethylene film and according to Nordfolien offer a high degree of light-fastness and weather-resistance. They are crinkle, scratch- and rub-resistant, and the printed materials have good anti-slip properties.

Additionally, Nordfolien uses varnishes with high sliding friction coefficients, excellent rub-resistance and high gloss.

High-quality laminates are imprinted with FlexiPrint inks in combination with FlexiLam white. The highly concentrated nitrocellulose-based system enables

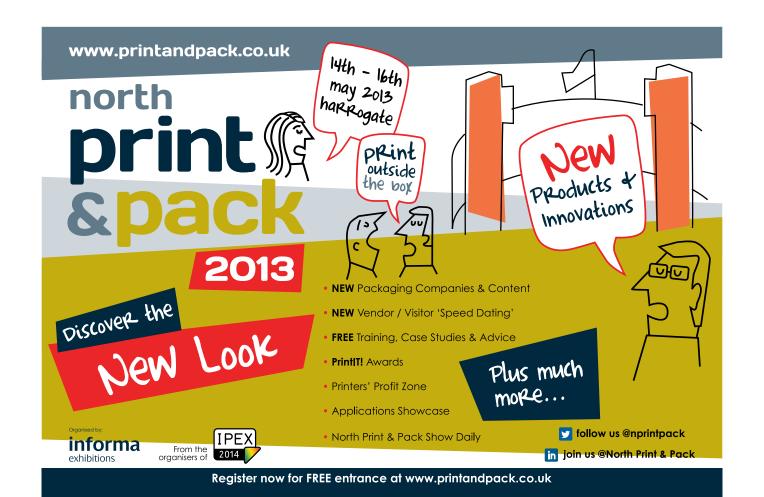
a broad range of applications to be covered in a very flexible way, with a small number of components and technical extenders.

For printing plates, Nordfolien uses the medium-hard nyloflex Act from Flint Group, which is optimized for the printing of designs that combine half-tones and solids. The converter uses Flint Group's rotec Blue Light Sleeve, a light, robust sleeve for conventional plate mounting suitable for all plate and adhesive tape thicknesses.

Nordfolien uses rotec adapters for their properties in terms of air conduction and handling on the press, as well as for pre-mounting.

Nordfolien is now using the latest conductive rotec Omega Blue Light sleeves together with rotec Omega Unifit adapters, and a pre-mounting unit with rotec Airo adapters. Key criteria in these choices were the consistent mounting properties of each individual sleeve, run-out accuracy and low tolerances, ensuring a consistent print even after extended use.

Close contact between the two companies, including the customization of the sleeve and adapter specifications, has been central to their successful relationship.







# Educating A new summit in South East Asia promises to open doors for label printers in the region A new summit in South Concept Conc printers in the region



looking to expand into package printing, and vice versa, explains event manager Jade Grace.

ackage Print Worldwide parent Tarsus is launching a new event for the printing and converting industries in South East Asia with Label Summit Indonesia.

Taking place May 29-30 at the Westin Nusa Dua Resort in Bali, the event features a day and a half conference program addressing various topics, trends and technologies in the region. Organized by Labelexpo Global Series, the name behind Labelexpo Europe, Americas, India and Asia, and aims to bring together label and package printers, brand owners and industry suppliers to support growth in the market.

An inaugural Packprint Summit is to take place in Miami this November, and will be detailed more extensively

in the autumn issue of Package Print Worldwide, but Label Summit Indonesia itself will have a large focus on the region's package printing market.

'Package printing will be widely covered as part of Label Summit Indonesia,' says event director Jade Grace. 'We have several conference sessions dedicated to the subject with topics including 3D technologies and sustainability as well as a general overview of the market from the Indonesian Packaging Federation.

'In addition, the keynote presentation, which is being given by gold sponsor HP, will explore package printing, especially with the advent of HP's new Series IV presses.

The keynote will be delivered by Christian Menegon, HP Indigo business development manager for industrial solutions, with Michael Pradit, general manager for Esko in South East Asia following him with a presentation on

value creation using 3D technologies.

Pradit will be accompanied by Andy Arto, managing director of PT Label Jaya Pratama, a converter from the region who will provide first-hand experience of this subject.

Converters from across the Asia-Pacific region form a strong part of the conference program in order to provide real-life case studies from those that have adopted, and are adopting, technologies to capitalize on the opportunities for growth.

Sessions during the morning of the first day are grouped under the theme "Global markets and the role of the local converter", and Grace says: 'The focus is on information about the latest technologies and trends through the conference and networking opportunities, and getting to know the key printers and suppliers in the region. It is important to understand the



trends first-hand from the ones actually experiencing the changes and growth.'

Brenton Barrett, president, Asia Pacific at Multi-Color Corporation, will open the conference with an overview of current global trends and a glimpse into the future, while Sri Yulianti, research and development packaging manager at Unilever Indonesia, will address a sustainable strategy for environmentally-friendly packaging practices.

In addition, a panel discussion, moderated by Andy Thomas, group managing editor of *Package Print Worldwide* and sister magazine *Labels & Labeling*, will feature printers from Thailand, Malaysia, the Philippines, Singapore and Indonesia, looking further at the market opportunities in South East Asia.

Other conference sessions are grouped by "The latest technologies, capabilities and applications" after lunch on day one, and "Identifying new opportunities for business growth" on day two. Both digital and conventional printing processes will be covered on the afternoon of day one, with topics such as online marketing and the use of social media, as to be addressed by Supa Stik Labels chief executive officer Pete Holywell, featured on day two.

A half-day networking activity is scheduled to take place on the afternoon

of May 30, while a table-top exhibition available during conference session breaks will provide attendees access to a number of key suppliers in the region, such as Gallus, Martin Automatic, Lintec, Jiaozuo Zhuorim Digital Material Co Ltd, Taghleef Industries and RotoMetrics.

'South East Asia is going through an exciting time of change as sustainable economic development coupled with strong domestic demand and a growing population with increased spending power are making the market a lucrative commercial prospect for foreign brands,' says Grace.

'The consumption of labels and packaging in the region is set to escalate and quickly too because lifestyle habits are changing. They are moving away from traditional markets where food was freshly butchered and little packaging was required, to buying more prepackaged and branded foods.

'Convenience is becoming more important as people work longer hours and more women are in full-time employment.

'As we've already seen in other emerging markets, this Westernized lifestyle quickly drives change across the supply chain and the manufacturing process.

'Indonesia has been said to be the one country missing from the BRIC nations.

'We have a show to cater for all the emerging markets now, with Label Summit Latin America for Brazil, Labelexpo Europe for Russia, Labelexpo India and Labelexpo Asia, as well as the South China Label Show.

'The only one missing was an event for the south-east Asian market and namely Indonesia.

'Label Summit Indonesia will cater for the growing Indonesian label and package printing industry, as well as the rest of South East Asia and Australasia – where we have good links and long-standing relationships with the local label and packaging associations.'

With this in mind, a Label Show to be held in Jakarta during April 2014 will follow the Bali summit, which Grace says will present actual technology directly to printers, with specific workshops, 'tailored towards their needs and interests'.

She concludes: 'The label and package printing industry in Indonesia is in its infancy compared to other parts of the world, but advances in using more sophisticated technologies, materials and marketing techniques will be fast-tracked to keep up with demand.

'For those fortunate enough to be involved in this cycle, the commercial opportunities and benefits are immense as the market matures.'



# Package printing inspection in China



As the quality of consumer packaging increases in China, the requirements for enhanced inspection are growing. Kevin Liu reports

f we take the consumer-oriented application fields of electronic, pharmaceutical, food and household chemicals, the requirements for in- and off-line inspection in China are growing.

The first sector to insist on automatic machine vision quality testing was household chemicals, where dangerous ingredients could be involved. This gradually extended to medicine, food and electronics.

The reason it started here was mainly because the quality requirements of household chemicals are comparatively moderate, while for other sectors the technical requirements are either much lower or much higher, and the vision system must be adjusted according to their detailed needs.

This is also an area increasingly affected by national government policies. Automatic testing systems for pharmaceuticals are developing fast for this reason, as are similar developments in the high-end electronics field.

Electronics packaging requires a very high quality of printing, not only for labels – where testing for bubbles, scratches and excessive glue is required – but in the overall packaging system.

One of China's leading domestic inspection technology providers is the Luster LightTech group. The company has been closely involved in the development of relevant industry standards.

Tang Zhiguo, printing industry manager at Luster, says: 'After years of testing work in the wider Chinese printing industry, we found some quality standards were lacking in the domestic package printing industry, which resulted in the absence of unified, objective, widely available and testable standards for all parties in the case of quality disputes between the printing corporations and end customers.'

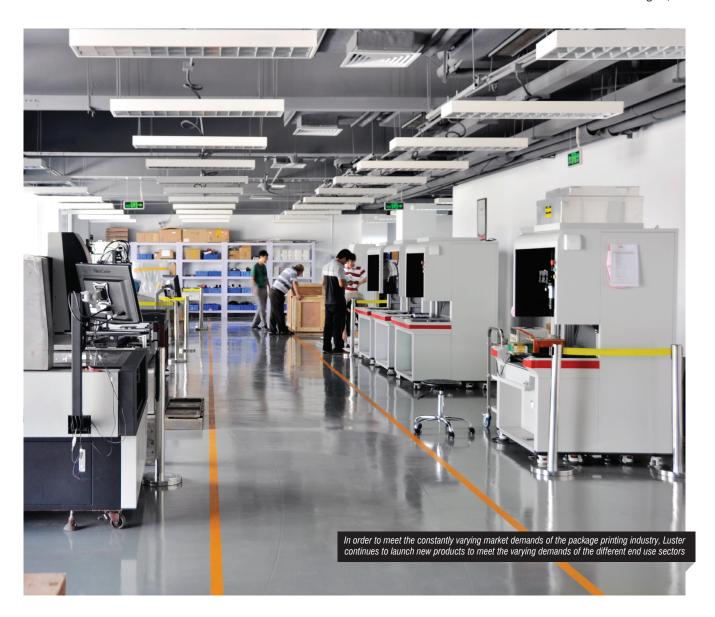
Starting with the labels industry, Luster asked other supplier companies to join together in the writing and checking of a new document entitled "Quality requirements and test methods for PS labels".

During this period of cooperation, Luster was mainly responsible for the establishment of visual quality standards for printed products. In order to accomplish this work in the best possible way, Luster built a specialized print quality testing laboratory.

'We hoped to provide our own contribution to the development of quality standards in the domestic package printing industry,' says Mr Tang.

#### Competition

Luster faces increasing competition, particularly from international vision system suppliers looking to capitalize on the growth in China, and has responded by concentrating on its development of



both software and hardware, along with high service quality levels for its customers.

An example is the LabelRoll print quality test system developed by Luster to give a deeper analysis of faults in label printing systems.

'The LabelRoll printing quality test system is one of our mainstream products at present,' says Mr Tang.

'The hardware uses our newly developed test platform, which is much more steady, simpler and faster, as well as more user-friendly. 'We have adopted a networked software control system and user-friendly operation interface, which has good scaleability.'

The system is designed not only to test regular print defects, such as spots, incomplete words, contaminants and bad overprinting, but also defects on highly reflective materials, such as hot stamping and metallic substrates.

Luster has a newly launched 3D defect testing system, checking for faults such as bubbles, scratches, excessive glue and creases. For label converters the system includes a system to test and identify defects automatically and take away the most time-consuming tasks of splicing out bad labels. This allows full play to the system's high-speed test functions and maximizes efficiency.

#### Continuous innovation

In order to meet the constantly varying market demands of the package printing industry, Luster continues to launch new products to meet the varying demands of the different end use sectors.

'For example, we launched the LabelRoll-330S system and the LabelRoll-330H system for pharmaceutical and household chemicals applications, with the latter including options such as a 2D defect testing for both regular defects and hot stamping and the 3D optical imaging module.'

Mr Tang points out that for packaging printers in China, the main advantage of purchasing machine vision testing systems is to ensure a 100 percent pass rate for their printing products, reduce

mistakes missed by manual inspection, improve customer satisfaction and reduce both press operator input and management costs – particularly under current circumstances where recruitment is difficult and there are high costs of employment.

'It will also improve management efficiency in ensuring printing quality and reducing cost.' Mr Tang recommends Chinese packaging printers pay attention to four points when choosing inspection equipment.

'Check you are meeting the correct degree of defect detection – for example 3D defect testing ability; check whether the system complies with the quality requirement of your customers; analyze the cost performance of each system; and check whether the supplier provides efficient and excellent service.

'The cost input of machine vision systems is not a small amount of money so the packaging printer must be cautious during their selection and comparison. It is better to leave some space for future development.'





Darts brand Target uses a range of effects and finishes to make its carton packaging stand out in retail environments. David Pittman speaks to designer David Morgan about packaging that hits the bullseye.

arget is a leading international manufacturer of equipment for the darts market, offering a range of products for amateurs through to professional players.

The company's player portfolio includes double PDC world champion Adrian Lewis, Tony O'Shea and Dave Chisnall, as well as pros from around the world, such as Japanese female player Jun Yamaoto, Tom Sawyer from the US and South Africa's Shawn Hogan

However, its products are not only for the elite, and are available through sports retailers worldwide for amateur players to purchase as they aspire to play like their heroes.

From steel tip and soft tip barrels, to flights, boards and mats, the product line is varied. Target is not the only dart brand to have such a portfolio, with Unicorn and Winmau offering similar products.

Darts continues to grow in popularity around the world, with amateur and professional competitions taking place from around northern Europe to the Middle East, and darts bars across Asia offering soft tip play as a leisure activity.

To capitalize on this interest, products as offered by brands like Target must stand out from the competition, with packaging a key tool to maximize their potential.

The carton packaging Target darts are retailed in is a key example of this, whether using images of its brand ambassadors, such as Adrian Lewis, or sleek designs that mimic the look and feel of the darts

themselves to capture the darts player's eye.

Target's Carrera darts are made from 90 percent tungsten with a titanium coated grip, and feature axial and radial precision milled cuts to produce a bi-directional grip form.

This unique design has provided a basis for cartons that takes these product aesthetics and extends them to the packaging.

Using embossing, metallic inks and foils, the Carrera packaging replicates the look and feel of the darts.

David Morgan is the designer at Target who worked on the Carrera packaging, as well as other series, and says the company's aim is to create an experience for consumers, both through the product and the packaging.

'Our philosophy has always been to raise the bar, break it and raise it again. Target's aim is to produce the full sensory experience of quality in both product and packaging.

'As the designer here at Target my goal has always been to "produce the best to stand out from the rest".'

To achieve this, Target takes a keen interest in the processes and finishes available for its packaging.

'We have been furthering our expertise in print and exploring new and innovative ways to showcase our products large and small,' says Morgan.

'In most cases I will use foil, spot UV, embossments and special colors like metallic pantones and spot colors.

'The birth of Carrera as a brand is about the journey and transforming the once "stuffy pub game" market, into the lush vibrant excited sport that it is today.

'I want my packaging, brands and general design to reflect that in all aspects.

'Since joining Target back in early 2010 redesigning the brands, packaging and marketing collateral has been my priority; Carrera is just the tip of the iceberg of what's to come.'

Morgan adds: 'No other brand in the darts market globally produces packaging with the attention to detail like we do.'



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