

Digital finishing – enabling Web-to-pack

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Analogue ->Digital-> Web

The inexorable move from analogue to digital affects every aspect of our lives today – the way we communicate, (mail – email – messenger - SMS) the way we shop (online) the way we listen to music (records, discs, iPods and playlists) and more. The technology not only changes the delivery mechanism but also the experience. One of the most obvious results of this major change is the shift in power from the producer or manufacturer to the end-user or purchaser.

Printing, publishing and packaging

Step-by-step, the printing, publishing and packaging industries have also been digitized. The most recent digital invasion has been the gradual intrusion of digital color printing (following the almost complete transformation of the pre-press) into the conventional offset world. Although the majority of quality print still continues to be made by conventional means, the arrival of digital printing has changed the entire print purchase supply chain.

The universal adoption of the Internet for almost every single one of these communication media has proven a major catalyst to all these processes. Email has taken the place of faxes and it is difficult to remember that PDF files once used to be viewed as unacceptable!

Once upon a time, the printer set the terms for his client, invested in production equipment and staff and sat back and waited for orders to come in. Orders were for long runs, frequently repeated with minor changes, and customer bases were loyal. Then, all kinds of changes came rapidly one after the other: business concepts like just-in-time, and supply chain management; young customers who knew precisely what they wanted and wanted it “NOW”. And digital printing offered the kind of flexibility and responsiveness required - the run size of jobs went down, the printer's overhead did not – he even needed to add additional sales personnel to ensure enough shorter-run jobs kept coming in to feed the machines and a whole new skill set to keep track of the expanding number of highly fickle customers.

For print customers, the terms used to define and measure print orders have changed dramatically. We no longer hold a conversation purely about colour quality, dot size, moiré and PANTONE® Colours – now we begin to speak up and set the conditions in terms of delivery dates, (hours, not days), versions, languages and even customisation or personalisation. Relevance becomes the key criterion.

Web-to-print

For many printers, the solution has been to move into web-to-print for such products such as greeting cards, business cards, calendars or photo albums. This frees up the print service provider to offer the kind of responsive service his clients require without adding overhead or personnel. Moreover, it enables him to adapt to a changing environment where volume growth comes from considerably larger numbers of jobs, and not just longer runs.

Workflow providers such as HP offer these types of systems.

Yuval Golan, Folding Cartons Segment Manager, HP Indigo Division - Translating the Web-to-Print advantage into Web-to-Pack

We have all seen the trends in the world of packaging – runs are getting considerably shorter while the demand for a very fast turnaround time has never been stronger. The growth in volume, however, comes from the explosion in the number of orders: influenced by factors such as versioning, localisation and seasonality, there is a need to efficiently take in, process and deliver a considerably larger number of jobs – but still, in record time.

The pinnacle of these trends is package personalisation – although challenging in supply chain, many CPG (consumer packaged goods) companies find this new avenue a valuable way to “engage” consumers (a real need in today’s cluttered retail environment). We see more and more of our converter customers find this a great differentiating offering and a high margin business, if they know how to supply a fitting solution, with a web-to-print service at the centre.

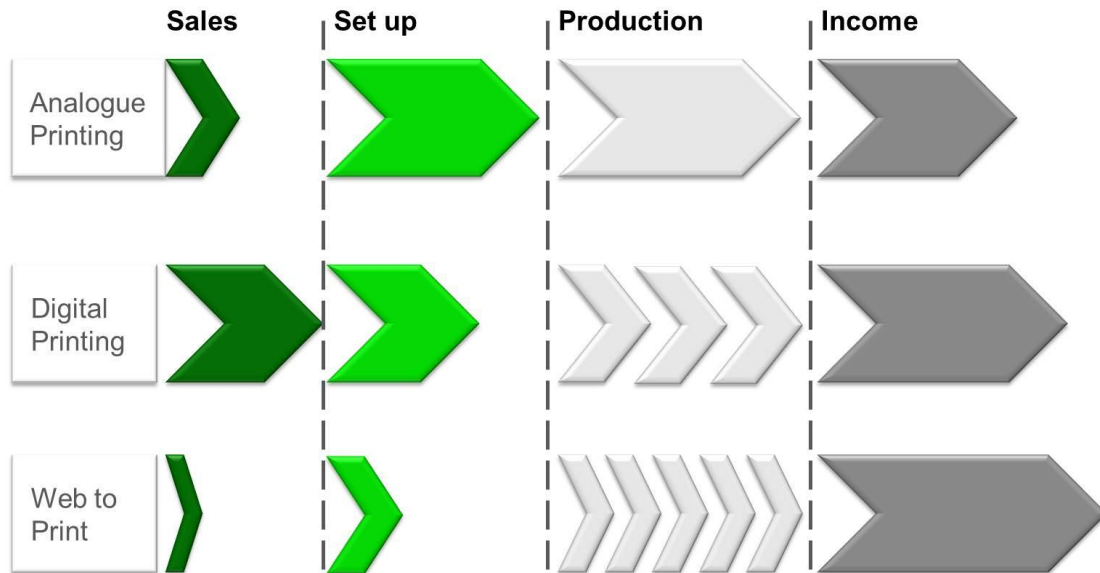
For the folding carton converter, the challenge of routing and managing such large numbers of jobs means that the automation and optimisation of his production process are not a nice-to-have, but a must-have.

The same trends are visible in the world of commercial print, where the need for just-in-time printing, which minimises obsolescence, and brings down costs associated with warehousing and transportation, has replaced the long runs of years’ past with a much higher number of short-run jobs, and where personalisation is ubiquitous, many of our customers already operating web-to-print systems. Whereas in the past a printer might have tackled dozens of jobs with thousands of pages each per day, they are now tackling thousands of jobs with perhaps hundreds, but most likely just dozens or even just a single page each. Packaging is inherently a more volume oriented business, but already today there is significant “riches in the niches” of customised runs.

The ability to take in large numbers of orders without increasing the overhead involved is becoming more and more important as these trends intensify – and implementing web-to-pack capabilities grants the converter a future-proof position, valued by customers – from multi-national CPGs to private and store brands.

Given the success and proven advantages of web-to-print systems today, it would not surprise me to see the same concept take off in the packaging world. After all, it’s a win-win situation for both print service providers and brand owners.

Analogue > Digital > Web-to-Print



Packaging trends

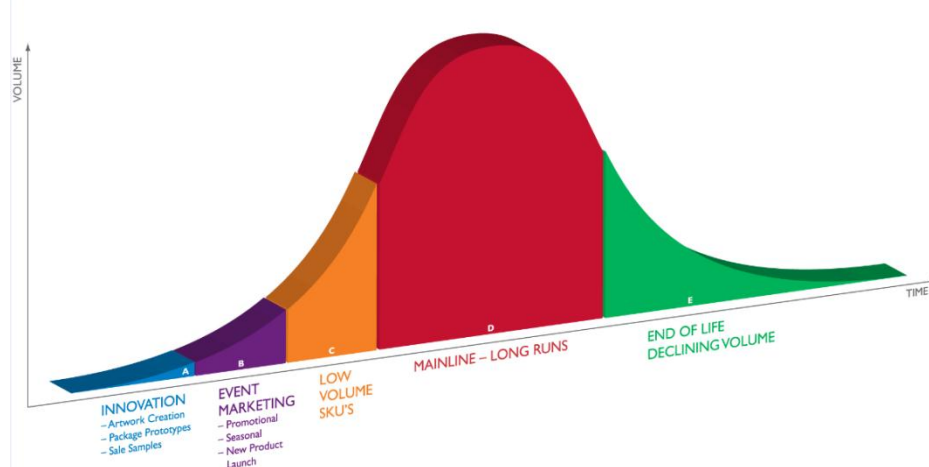
In the packaging world, things move more slowly. At least on the converting side. (Brand owners and retailers are already well ahead of the curve!) Dies have been made the same way for the past hundreds of years. The influx of digital technology has been most felt in the printing of labels and packages but not in the cutting, creasing, folding and gluing part!

Until drupa 2012, when Highcon introduced the Highcon Euclid production digital cutting and creasing machine.

As history does always seem to repeat itself, we can expect to see the same process of change in the supply and purchase chain in packaging that we saw in print. Digitising the process will lead the way to better differentiated, customised, and effective products while simultaneously making the process more efficient, economic and responsive.

The Move From Mass Production To Mass Customisation¹

PACKAGING LIFE CYCLE



A tremendous amount of growth is occurring in private labelling, the epicentre for digital package production. On retail shelves across the world, private brands are making their presence known. According to a recent study conducted in the U.S. by the Private Label Manufacturers Association (PLMA; www.plma.com), overall sales of store brands increased 5.1% between 2010 to 2011, pushing private label dollar share up half a point to 19.5%. According to data collected by the Nielsen Company, this was a record high for the 52-week period ending December 24, 2011. Private label unit share rose to 23.6% during the same timeframe, setting another record. This means that more than one out of every five items sold in U.S. supermarkets, drugstores, and mass merchandisers is private labeled.²

Given that highly targeted marketing does indeed drive sales, we can expect to see more and more use of private label packaging in a variety of market segments which will, in turn, place immense pressure on packaging converters to keep up with the growing demands of their clients.

The ever increasing demand for smaller runs, versioning and even customisation means converters need to be able to cost-effectively produce shorter runs of more types of packages on a timely, market-driven basis. Needless to say this demand incurs a desperate need for more agile manufacturing and delivery processes. And beyond the efficiency, brand owners are constantly pressing for more innovative shelf impact for the growing number of SKUs.

Digital finishing will offer packaging converters all the advantages of last minute changes, online editing, short run, on demand production that are typical of the move to digital while at the same time reducing time, operating and labour expense and carbon footprint.

¹ Mike Ferrari, President of Ferrari Innovation Solutions, LLC.

² Infotrends, May 2012 Highcon Euclid: Enabling the Digital Packaging Opportunity

The end-game – private label not just for major supermarkets

The most prevalent use of private label manufacturing is for the sale of value-defined products within major supermarkets but there are other, rapidly growing trends that will be fortified by the ability to economically produce smaller private labels.

One such trend is the movement by environmentalists to encourage local purchasing. For consumers this offers a way to cut down carbon emissions while at the same time supporting local small businesses.

Another avenue is that of premium positioning of selected goods from within the broad private label range.

And the huge variety of health, dietary and food supplements is also splitting into more and more brands as trust grows in the products.

Web-to-pack

With the arrival of all these highly segmented offerings and short runs, and the need to be able to process far more jobs per day, week or month, the converter will need to streamline his manufacturing and sales processes to ensure maximum profitability. This would be far more economical with the adoption of a web-to-pack functionality along the lines of successful web-to-print systems run by forward-thinking printers. Carefully implemented, such a system could lead eventually to customised consumer-facing private label packages for private or corporate functions, events, or gifts.



Jan de Roeck, Esko, Director Solutions Management - Don't let prepress be your bottle-neck

A number of printers and converters have conventional printing and finishing equipment and more than one digital press. For the volume of business these converters receive, there is certainly sufficient printing and finishing press capacity. But what is often lost is that press or finishing equipment capacity is not the key determinant for overall production capacity. With production runs getting smaller, more orders have to be processed throughout the plant. This puts more pressure and strain on prepress and order administration. So, even with sufficient production capacity, the true bottleneck of a converter is typically its capacity to manage the jobs. With this in mind MIS, all of a sudden, becomes very relevant for every packaging converter, but especially for a converter using digital presses and digital finishing. The next logical step, integrating MIS, prepress and the web storefront, will create a supercharged automation system, sharing workflow data, automatically driving prepress and ultimately delivering pre-production capacity on par with printing and finishing capacity. Now we can start running a cost-efficient converting operation.

Design and produce with a short cycle time in mind

A lengthy approval cycle will detrimentally impact the basic concept and inherently the underlying business model of short run packaging. Software tools that help to speed up the approval process using the internet as the enabling technology, combined with 3D visualisation are the remedy for excessively long iteration cycles during approval. Packaging professionals use 3D packaging software to generate life-like in-store visuals long before the first box is produced. At the same time, brand managers have 24/7 access to the latest versions for the fast-tracking of approvals. Hyper-realistic virtual 3D mockups act as a valuable quality assurance tool for the designer, the brand owner and the converter. Errors are detected during the early stages of the design, which saves considerable time and waste. Such technology goes perfectly hand in hand with digital finishing equipment to produce the ultimate short run packaging: one with a lot size equalling one.

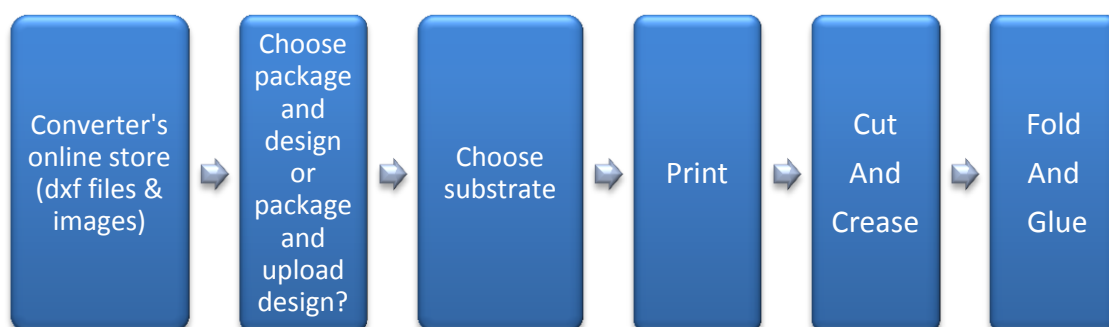
What does it mean for the converter?

For the savvy carton converter, especially those already with a foothold in digital printing, the ability to leapfrog into the concept of web-to-pack offers a highly efficient just-in-time paradigm for today's short run, versioned package production.

By using existing software and hardware solutions, the converter will be able to give not only the major brand owners, but also the smaller, private label brand owners the ability to order what they need, and only what they need, when they need it – and to make the packages even more creatively attractive than can be done with conventional technology.

By streamlining the process, offering a set of package templates online, and the ability to upload graphics, the converter will be able to stream jobs through the system without increasing the manpower otherwise needed to process the larger number of jobs and also, and no less important, an increasing number of customers.

Conceptual workflow



The web-to-pack concept offers converters a solution to numerous challenges:

- Ability to sell value
- Ability to perform short-runs profitably

- Efficient Sales management
- Speed to market
- Greatly improved responsiveness to customers
- Supply chain management
- Reduced cost of labour
- Reduced carbon footprint

Putting it together

Short runs, fast-turnarounds, frequent changes, more targeted, versioned packaging variations and the need for efficient workflows will increasingly define the future for packaging converters. Their ability to respond profitably to these demands from customers will, quite simply, determine their ability to survive.

These changes in the packaging marketplace are enabled and driven by digital technology, and the logical next step is the automation and digitisation of finishing and converting processes.

Converters that adopt digital technologies to address the areas where bottle-necks occur will be the converters who will best satisfy their customers and attract new business.

Whether it is the growth of private labels, or the desire of small companies to compete on the shelf as equals with big brands, digital solutions are what will enable the fulfilment of their ambitions.

The sheer scale of the packaging industry will be a major force in bringing about change at converters, and the pace will accelerate faster than most anticipate. Innovative disturbance technologies are already appearing that will transform conventional converting into a new, digital paradigm, and Highcon is part of that transformation.