Next Generation Workflows

# Support Label Production Growth

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The increasing adoption of digital technologies has placed new demands on print, publishing and packaging service providers. These demands include cost and turn-time pressures, new vertical integration requirements, support for both digital and conventional printing methods, and a host of new required services, all of which affect the product mix companies must deliver to remain profitable. While the state of the market and some of the newly required production tools are starting to find a balance, most print service providers have not made the necessary internal changes to adapt. This is most acutely felt in the tag and label segment of the packaging market, which has a large number of small & medium-sized printers running a wide variety of printing technologies, production workflow solutions and MIS systems.

A prime example of a company that has adapted is Creative Labels of Vermont (CLOV) in Winooski, Vermont. CLOV President, Dwane Wall, believes that "Those who have adapted will prosper, and those who have not will continue to struggle". While CLOV is in one of the northern most areas of Vermont, just north of Burlington, they have continued to grow their large regional and national client base, with label runs from a few hundred to millions.

Opportunities abound

Packaging production is projected to grow at up to 5.3% annually through 2020, and digital print for packaging is projected to grow annually at 15.4% to 2022. The Smithers Pira 'Future of Digital Print for Packaging to 2022' report estimated global packaging printing with toner and inkjet at $13.4 billion (€11.4 billion) for 2017. Of that figure, labels accounted for 78.6% of total value and 86.0% of the print volume in 2017. This rate of growth is being driven by new packaging applications and market segmentations, and other packaging segments are already starting to follow the same path that digital label production already has. Digital packaging is growing strongly because it is cost effective for short runs and offers brands and retailers new opportunities.
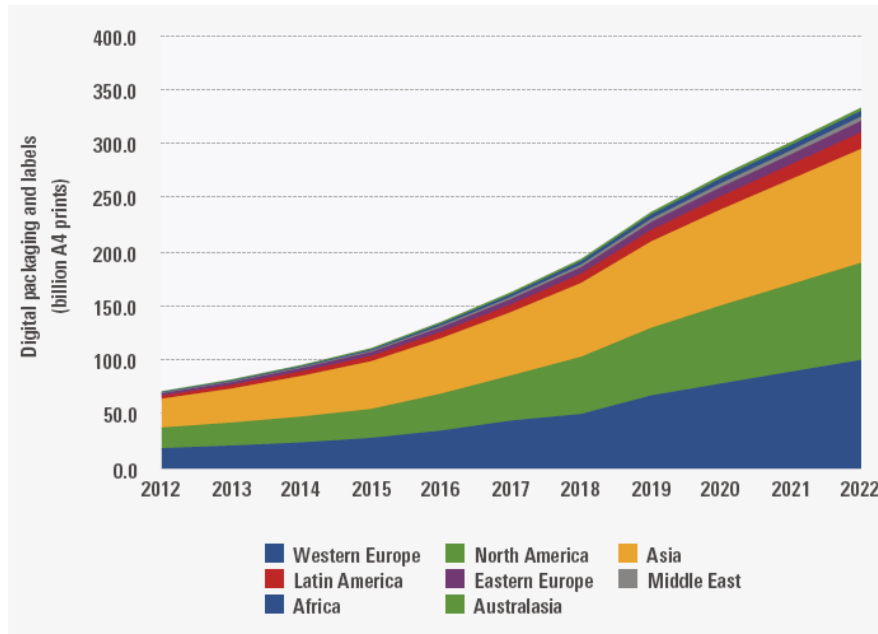
Caption: Global digital packaging and label market share 2012-2022

A lot of applications, technologies and requirements

Flexography is still the dominant printing technology in label production, and while digital print technology is growing, especially in label production, CLOV believes that any solution needs to include flexo as a key component of their manufacturing bull pen as a result of cost and performance advantages. flexo presses have seen a huge boost in both automation, control, and productivity as a result of the addition of digital support technologies. With these developments, we are already seeing flexo displacing gravure on one end of the spectrum, and even putting pressure on the inkjet crossover equation on the digital end. As production inkjet technology continues to develop, the hybrid digital/flexo presses are becoming a key component of many flexo pressrooms. This can be seen with the extension of digital presses with flexo-based embellishment and finishing.
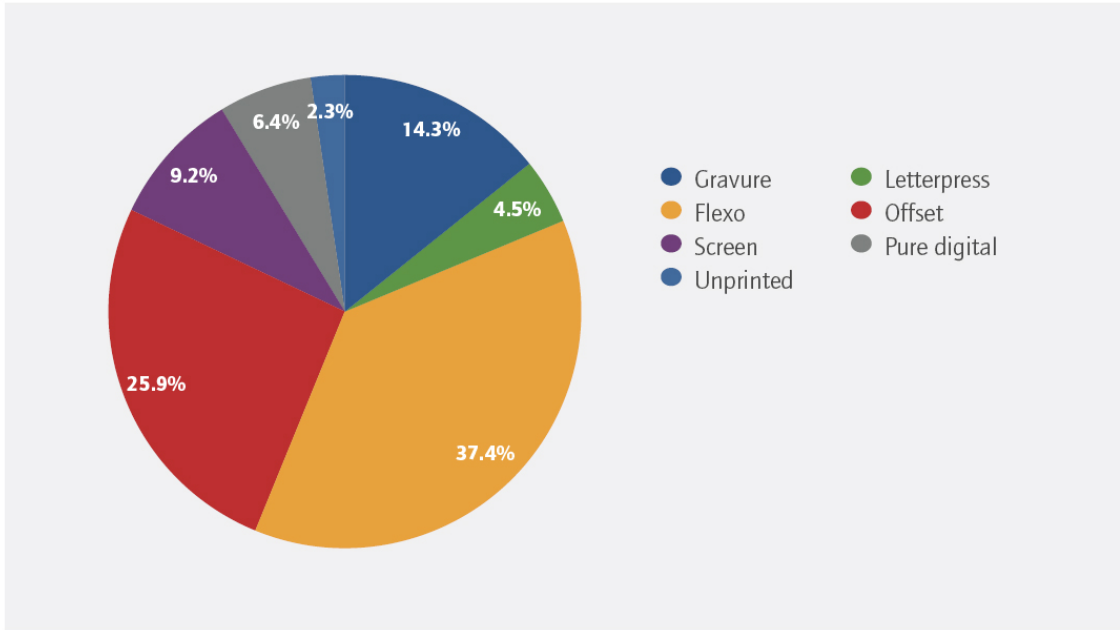
Source: Smithers Pira

One of the advantages of this type of hybrid equipment is that the flexo transport has always been a very configurable printing technology. This is a real benefit to label converters who are used to maintaining and changing press configurations based on the specific needs of the product they are running.

Since most label and packaging production requires hybrid customized manufacturing processes, it also requires new generation workflows to provide the support for the changing market demands and disparate production requirements. At CLOV, they recognized the importance of having a next-generation workflow to help support their current and future needs and acted on it.

Next Generation Workflows

Developing a business and/or production infrastructure at the core of a business is a very challenging process, especially in a changing market. As printing and converting firms are faced with pressures from customers to speed-up turnaround time and drop prices, they turn to workflow automation to help squeeze efficiency from their operations. Data and content are leveraged throughout the business and production process to help automate the entire workflow, which can increase efficiency and reduce costs by

eliminating as many human touchpoints as possible. In a transformative workflow, production is flexible enough to accommodate channels beyond print.

Research shows that successfully transformed companies across the industry take a much more holistic approach to workflow. It usually starts by examining the core production process and then adding layers on top of it that optimize the workflow further upstream— in many cases, all the way to the customer. By leveraging the value each functional layer provides in the translation of the customer input to a predictable production process, firms ensure that job information and content is captured accurately and completely before it hits production to enable a more automated workflow.

The following provides an overview of the transformative workflow reference model developed through the research efforts of this study.
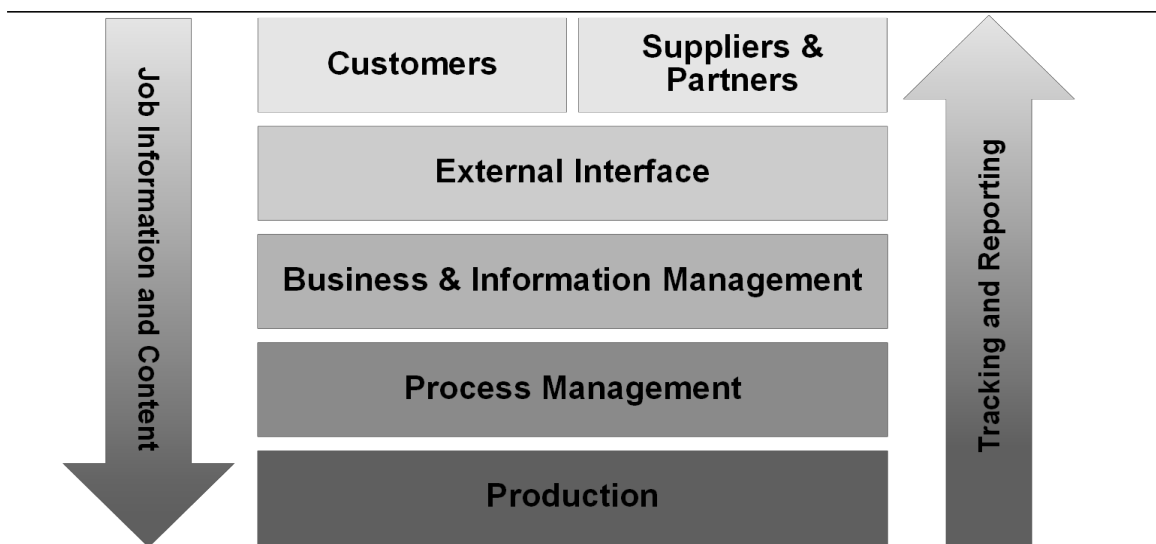
Source: InfoTrends Data Processing & Analytics within Cross Media Direct Marketing Value Chain
Source: PRIMIR 2011 study "Transformative Workflow Strategies for Print Applications" by InfoTrends.

This model represents one of the biggest points of transformation in production that we see across all printing industry segments.

End-to-End Process Management

End-to-end process management is a key element of workflow transformation. It provides visibility and control of the production process from start to finish, including status, load balancing, and response tracking. Monitoring incoming jobs and automatically matching them with the best available production capacity facilitates automated production and can provide greater visibility as well as transparency to customers. At CLOV, they use Label Traxx to manage their business and integrate with their production workflow systems from HYBRID Software.

External Connectivity with Customers, Partners, and Suppliers

In a transformative workflow, web-based interfaces are more widely utilized as a means of doing business with customers and in the case of HYBRID Software's CLOUDFLOW, CLOV's production systems as well. CLOUDFLOW is a rule-based automation production platform that operates in a browser environment. Depending on the industry segment, the type of web interface software and the purpose it serves can vary widely. However, integration with external business, information, and production systems is a key aspect to any transformative workflow. This integration is often enabled by different types of connectors that integrate one system with another, allowing them to pass relevant pieces of information between each other.

Internal Connectivity

Internal connectivity consists of integration between systems and functions within a firm's business and production operations. Streamlined interfaces between all functional areas enable job instructions and job content availability in real-time to all necessary departments in the production process, from submission all the way to delivery and billing.

That being said, with workflow systems it is definitely not one size fits all. Most companies are interested in a solution that is flexible enough to fit into their general workflow, and less interested in having to change their operations to fit into a predesigned MIS or production workflow model. This is driven by the realization that

there are many more solutions available than in the past., and it is also a reflection of the cultural shift toward getting what you want, when you want it, and in exactly the form you want it.

Production Workflows are evolving to meet the need

The adoption and automation of PDF packaging workflows, as we saw with commercial print and publishing workflows in the late 1990's and early 2000's, will not only increase margins and reduce cycle times, but also further drive the adoption and use of digital print technologies. It will also help support the increased use of hybrid printing devices that are beginning to find their way to the market. In fact, we expect to see a significant increase in both hybrid and bespoke specialty production inkjet. CLOV has taken that to heart and selected HYBRID's PACKZ native PDF editing software to streamline production and ensure the quality of their deliverable product.

Specialized converting needs and streamlined design to distribution workflows to enable faster time to market, are just some of the areas that are impacting the adoption and growth of digital print technologies and workflows in this space. If you add to that some of the new opportunities for the CPCs like personalization, on package promotion and embedded intelligence just to name a few, you can see that there are some challenges and exciting times ahead.

Next Generation Solutions for Optimizing and Automating Production

We are all waiting for the day that PDF/X-6 solutions will support standardized packaging production, however it isn't stopping the development and use of PDF in packaging production today. We are already starting to see the implementation of some of these individual components finding their way into software vendors' products. This has led many large converters to rethink and retool their production workflows. One of these tools is PACKZ, a native PDF editor that was designed to handle the current and future needs of PDF for packaging production.

Creating a holistic workflow approach that goes beyond the packaged workflow systems that are available with your hardware purchases is difficult, although there are

alternatives that offer additional flexibility by embracing open architectures and industry standards. Many of these 'non-aligned' (to vendor specific equipment) systems offer similar workflow mechanisms like 'pipeline workflows' (flexible task connectivity), or API (Application Programming Interface) integration, but are specifically designed to bridge disparate systems and processes into a cohesive solution. HYBRID Software is one company that has been developing solutions to satisfy this growing and changing market, something that CLOV had embraced and relied on. According to Wall, "having a partner like HYBRID has been a key factor in our ability to transform our business.

Increasingly process bridging applications like those from HYBRID Software are becoming the best way to tailor your workflow to your business requirements. This approach uses a 'suite' of applications that can be tailored, interconnected and integrated with your existing systems. In addition to MIS and accounting integration, these solutions offer a middle-ground suite of applications that can supplant many of the functions of an MIS system. All of this can be automated using CLOUDFLOW, its rule-based Pipeline application along with many of the available modules. HYBRID's roots are in prepress and packaging, so these modules include PROOFSCOPE an online soft proofing application, PACKZFLOW for prepress automation, iC3D for 3D generation and viewing and many other modules to automate and enhance other areas of production.

While there are many tools available to build a workflow, these same tools can also help you build efficient or inefficient solutions. In the end, you still need to understand what you want to accomplish and find the most effective way to achieve it. Ultimately, you need an effective plan to start with, or you wind up automating an inefficient workflow and gaining very little. Ideally, working with experienced 'change agents' and taking cues from best of breed operations is the best way to proceed.