

A White Paper by: Cary Sherburne

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Introduction

This white paper discusses how industry drivers and megatrends create a challenging context in which packaging service providers and printers are under constant pressure to change. In such an environment, print production workflow solutions address the challenges by focusing on five key directions

- 1. Workflow automation, shifting gears to "lights out."
- 2. Smart templates separating content from design.
- 3. Quality as a first consideration.
- 4. Task-driven interactive editing.
- 5. The supply chain integrates to a globally connected virtual workplace.

Fighting for the Consumer

Packaging buyers for global brands and private labels are continuously looking at ways to improve market share for their consumer products. One of the means to influence the consumer's buying behaviour is to develop and deploy multichannel and cross-media campaigns. Within such campaigns, a proportionally growing percentage of the marketing budget is spent on packaging development, innovation and diversification. The product package is an important component in the brand campaign as it enhances shelf appeal in the store. The package IS the brand. This is critical since market research shows that in fast-moving commodity categories, more than 70% of buying decisions are actually made at the shelf. The store is the ultimate opportunity for the brand to talk to the consumer and to influence the 'zero moment of truth.'

This means packaging that not only protects the product, but shows it off to best advantage. It also means delivering services with the smallest possible environmental footprint and cost base. Ultimately, the product must have the best possible shelf appeal with packaging that targets smaller and smaller market segments.

As brand owners strive to differentiate their products and increase product shelf appeal, they are looking for creativity and innovation from their supply chain partners. They are requesting smaller lot sizes, more versioning, reduced cycle time, and of course, a better return on their packaging investment.

They also want to efficiently produce intelligent packaging that prevents counterfeiting, extends shelf life and is environmentally sustainable. This intelligent packaging may even be generated in lot sizes of one to include trace-and track-information, serialization, contest codes, and other information that might only appear on a single package.

At the same time, brand owners and packaging converters alike are seeking more efficient and effective means of producing compelling packaging. New technologies and techniques add value and shelf appeal to packaging. These include specialized coatings, unique shapes and die cuts, and printed electronics. But these unique and attractive packages must still be produced in a cost-effective manner. At the same time, packaging converters must be cognizant of regulatory requirements as they produce final packages for their brand owner clients.

Smarter Packaging Prepress

For packaging converters, these dynamics present a wide range of challenges. Many packaging manufacturing lines are set up to efficiently produce long runs of the same package. Changeovers can be time consuming and costly. Post-production application of inkjetted variable information may not deliver the expected quality. There is also increased opportunity for error and waste.

We find ourselves in a new age of packaging prepress and production. We are operating in a highly connected global supply chain with the ability to integrate a wide range of tools and technologies into a seamless, automated prepress/production workflow. This approach delivers revolutionary efficiency and profitability. It also means that packaging converters can maintain a high level of connectivity with brand owners as packaging makes its way through the production process.

In this new model, individual packages may carry a higher unit cost. However, that unit cost is offset by the benefits of better management of the packaging supply chain. The end result is a lower total cost across the supply chain with a significantly improved time to market, less wastage and the ability to target ever-narrowing market segments.

The Brave New World of Packaging and Prepress Production

For packaging converters, "faster, better, cheaper, greener" remains the challenge. At the same time, they will push through their plants more production jobs in shorter runs than ever before. **SIGNIFICANT PROGRESS IS BEING MADE IN THE** STREAMLINING OF THE PRODUCTION WORKFLOW PROCESS FOR PACKAGING THROUGH THE EFFORTS OF SUPPLIERS TO THE INDUSTRY SUCH AS ESKO. AS WE MOVE CLOSER TO THE POSSIBILITY OF NEAR-LIGHTS-OUT PRODUCTION FOR SHORTER RUNS OF PACKAGING, BRAND OWNERS WILL INCREASINGLY BE ABLE TO TAKE ADVANTAGE OF THEIR CUSTOMER DATA STORES TO TARGET EVER SMALLER MARKET SEGMENTS, ADDRESS SEASONALITY, AND PROVIDE AFFORDABLE PACKAGING FOR SPECIAL EVENTS. WE HAVE SEEN THIS ANALOG-TO-DIGITAL TRANSFORMATION TAKING PLACE IN OTHER AREAS OF THE PRINTING INDUSTRY, AND IT IS EXCITING TO SEE THE PROGRESS WE ARE MAKING ON THIS FRONT IN PACKAGING.

Kevin Karstedt, Karstedt Partners, LLC

Here, then, are 5 key directions for packaging workflow that paint a vision of the future, addressing the diverse needs of both brand owners and packaging converters.

1. Workflow Automation turns out the lights in prepress.

There is no need to leave the lights on in prepress; operator intervention is minimized.

• Solutions such as Esko Automation Engine Smart workflow tickets route designs intelligently and with as little operator intervention as possible, from design to press-ready printing plates.

- Workflow automation stretches beyond printing and finishing, integrating with brand design at the front end and logistics at the back end.
- With new modules such as Automation Engine Connect, prepress workflow is no longer an island of expertise, but rather, the centerpiece that integrates data from whatever source, internal or external, into the packaging production workflow
- Esko Color Engine is embedded throughout the entire workflow to ensure accurate and consistent color reproduction from start to finish. It is linked to the PantoneLIVE[™] cloud for flawless color communication.
- Operator interaction is limited to exception handling and quality checking.
- Open industry standards enable integration with business systems and data silos, regardless of physical location.
- Cloud-based packaging management systems interface with prepress workflow servers in open and transparent way
- The flexo platemaking process, the last step before the printing press, becomes more automated with CDI devices that ensure integrated plate imaging.
- 2. Smart Templates are the name of the game.

A smart design template is the basis for a lights-out prepress workflow. It guarantees brand integrity and regulatory compliance with maximum productivity and fastest time to market.

- With Esko Dynamic Content, content creation is strictly separated from design.
- The designer determines package design within an established brand guidelines framework.
- Critical content resides in a secure, cloudbased packaging management system administered by the brand owner.

INCREASINGLY, DESIGNERS WITHIN THE PACKAGING WORKFLOW WILL BE FOCUSED ON CREATING SMART TEMPLATE DESIGNS THAT ALLOW THEM TO EXERCISE THEIR CREATIVITY WHILE ENABLING OTHER STAKEHOLDERS WITHIN THE PACKAGING SUPPLY CHAIN TO CONTRIBUTE CONTENT WITHIN APPROVED CONSTRAINTS, ENSURING BRAND INTEGRITY AND REGULATORY COMPLIANCE.

David Zwang, Zwang and Company

- Within the template, smart objects are linked to approved content in a secure database within the cloud-based packaging management system.
- 3. Quality comes first

The focus of a prepress operator shifts entirely to quality checking. More efficient use is made of brand owner time.

• New interactive tools dedicated to quality control streamline the task.

- Brand owners are engaged to approve the design and to review the package digitally prior to the press run. The approval process is managed by the automated workflow.
- Once approved, automated workflow continues its mission to deliver the highest quality in the shortest possible time.
- Esko Suite 14 integrates the workflow with inline visual inspection systems and closes the loop with the printing process.
- Integration with CAPE palletization and logistics software provides ample opportunity to produce environmentally friendly packaging through a reduction in supply chain waste.
- Esko Kongsberg digital cutting tables for packaging, display and sign applications, provide automation, increased productivity and precision.
- 4. Task-driven interactive editing

The prepress operator is now focused on building smart templates, quality control and exception handling.

- New cross-platform software apps provide a task-driven user experience.
- Only the tools required for a task are on the operator's tablet or desktop.
- Intelligent wizards guide the operator through expert processes.
- In the new FlexProof, profiling brand colors for a multi-channel press setup is simplified.
- With Studio and Store Visualizer, Esko has pioneered the use of 3D visualization for virtual mock-ups and store-simulation in the packaging workflow.

THE BIGGEST CHALLENGE FACING THE PACKAGING VALUE CHAIN IS TO HELP BRAND OWNERS BRING PRODUCTS TO MARKET EVER-MORE QUICKLY, IN MORE VARIANTS AND WITH HIGHER ON-SHELF **IMPACT - WHICH INCREASINGLY INCLUDES** PERSONALISATION, LANGUAGE-BASED CUSTOMISATION AND INTEGRATION WITH SOCIAL MEDIA. PACKAGING CONVERTERS MUST BECOME A CENTRAL PART OF THE BRAND OWNERS' GO-TO-MARKET STRATEGY WITH THE ELIMINATION, AS FAR AS POSSIBLE, OF MANUAL INTERVENTION IN THE WORKFLOW FROM DESIGN THROUGH TO DELIVERY; AND IT REQUIRES THE KEY BRAND OWNER STAKEHOLDERS TO BE INTERACTIVELY INVOLVED IN THE PROCESS AT EVERY KEY STAGE FROM DESIGN APPROVAL TO ORDER CALL-OFF. ESKO IS LEADING THE WAY IN DEVELOPING THE NECESSARY INTEGRATED TOOLS.

Andy Thomas-Emans, Group Managing Editor, Tarsus Labels Group

5. The supply chain integrates to a globally connected virtual workplace.

In this brave new world of packaging production, stakeholders can work on projects from virtually anywhere in the world, including in a home office or even on the road.

• Integrated packaging-savvy production and asset management systems dramatically improve time to market and reduce cost.

- Esko WebCenter takes this a step further with new technology that simplifies the transfer of jobs from one production facility to another, handing over entire projects in a single transaction.
- Another facet is the integration with CHILI Publisher that turns WebCenter into an online editing platform for any remote stakeholder in the process.
- Dedicated tools for project management and supply chain collaboration make Esko WebCenter an effective backbone for global and local packaging production facilities.

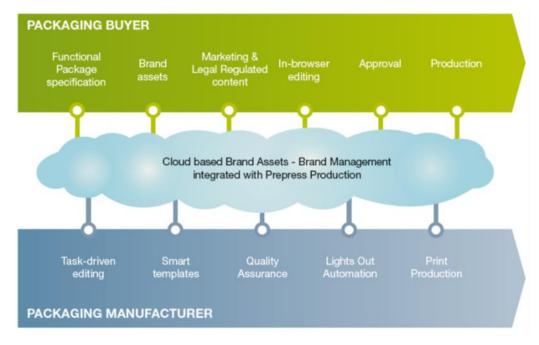


Figure 1: process flow of tomorrow's packaging preproduction

Next Steps

Implementing systems and solutions that keep brand owners and packaging converters ahead of the curve of these critical trends is a must. Technology is changing rapidly in a very dynamic and highly competitive environment. Choosing partners with the right vision and solutions to ensure that packaging operations are futureproofed is vital.

This white paper was sponsored by Esko. To learn more about how you can stay ahead of the game in this brave new world of packaging prepress and production, visit <u>www.esko.com</u>. THE COMPLEXITY OF PACKAGING WORKFLOWS SHOULD NOT BE UNDERESTIMATED. THEREFORE THE ABILITY TO AUTOMATE DESIGN AND PRODUCTION PROCESSES WHILE MAINTAINING HIGH QUALITY STANDARDS IS CRITICAL TO THE FUTURE SUCCESS OF BRAND OWNERS AND THE PRINTERS WHO SERVE THEM. THESE SAME AUTOMATED WORKFLOWS ALSO NEED TO LINK EFFECTIVELY WITH OTHER MEDIA, AS MARKETERS BEGIN TO LEVERAGE PACKAGING IN INNOVATIVE WAYS TO CONNECT AND

Jim Hamilton, Group Director, InfoTrends