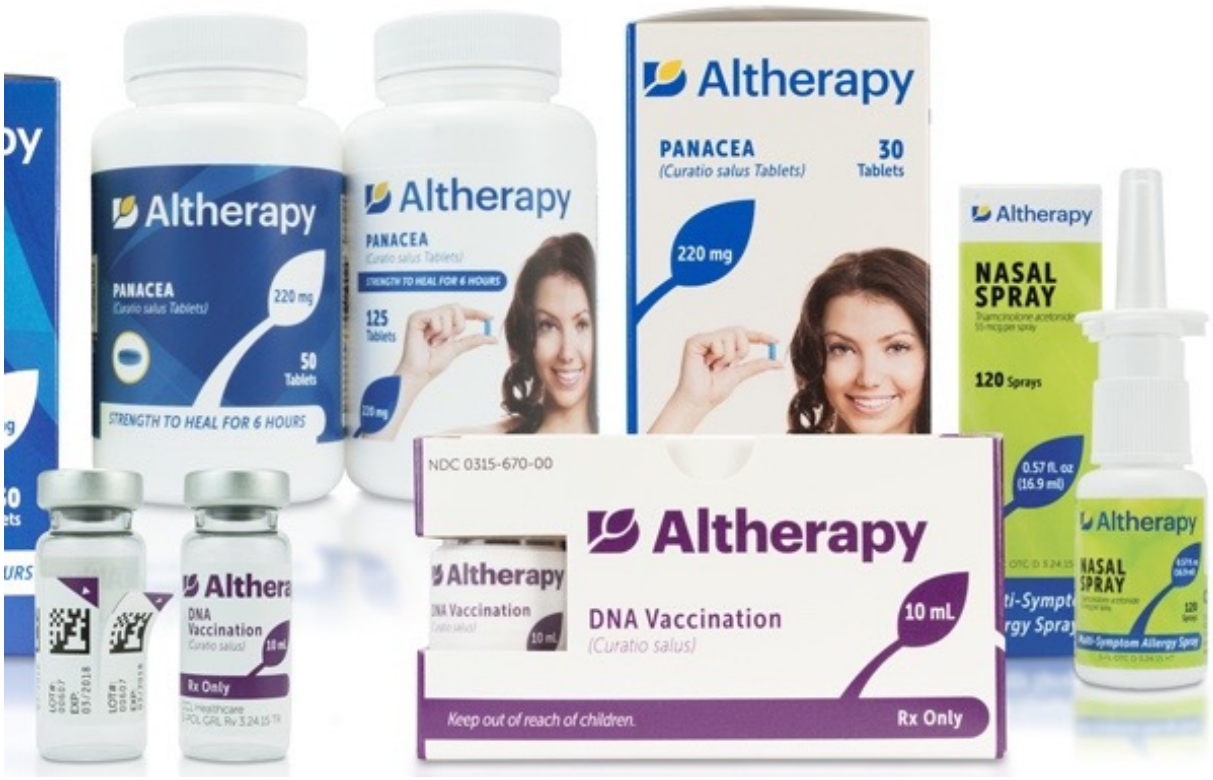

[On Demand] Digital Offset Printing is becoming the 'New Normal' in Healthcare Packaging

Digital systems are changing the economics and functionality of sourcing, scheduling, and drug and device production [and increasing graphics quality]

Joe Tenhagen, Marketing Director, CCL Healthcare

Are you experiencing an increasing number of shorter-run SKUs with lower volumes? If you are, you are not alone. In fact, according to industry research, the majority of Rx SKUs have annual volume of fewer than 500,000 units. Figures are similar for veterinary products and medical devices as well as for dietary supplements. Low-volume, high-mix complexity is challenging drug manufacturing around the globe.

Drivers for this phenomenon include biotechnology drugs, specialty drugs and devices, and a resurgence of orphan drugs – all focusing on personalization of patient care. Blockbuster drugs are giving way to more custom patient treatments.

What's the Impact on Your Operation?

You probably already know. The effects of these lower volumes are likely causing many disruptions in conventional manufacturing and distribution with negative impacts on efficiencies.

The costs of secondary printed packaging, including labels, folding cartons and package inserts are on the rise, but not how you might think (prices/1,000 units). Instead, the costs are hidden beneath the surface (think iceberg). Increasing SKUs multiply the 'not-so hidden costs' of inventory and obsolescence. It's a larger absolute figure than ever before getting more attention on the balance sheet. Further, it is difficult to achieve expected per unit prices with lower volumes using 'conventional print production,' such as offset or flexographic technologies. Supply Chain and Procurement leaders are demanding lean supply chain innovation from converters. Digital offset printing has emerged as a proven way to help 'lean-out' your printed packaging sourcing.

"Digital printing helped us nearly eliminate outdated packaging we kept in our warehouse. We kept only a small amount of safety stock for last minute orders. Orders are smaller and replenishment is faster now."

- Production Manager

01 / What is Digital Offset Printing?

Digital print production, like other digital innovations like cameras, word processing, and music, eliminates many analog processes to achieve near on-demand results. Leading this innovative approach is HP with more than 1,600 Indigo Digital Presses installed worldwide to produce labels and folding cartons. In fact, HP Indigo outsold all conventional presses in 2012 (HP).

Two significant technological improvements make this possible: First, from prepress to ink on paper, it is a fully digital process eliminating human intervention and printing plates. Set-up and make-ready time and waste are nearly eliminated. Once color is formulated on the substrate, good labels, cartons and other packaging components are produced within a few minutes. Automatic color correcting technologies ensure brand consistency between runs and SKUs. With fewer steps and a fully digital process, the potential for defects is greatly reduced thereby increasing quality consistency.

Second, HP's 'ElectroInk' and 'One Shot' technology eliminates traditional single-color 'press stations' and instead, lays downs all colors at the same time onto the substrate. This eliminates waste and provides perfect ink registration. Graphics can be created without ink-to-ink 'trapping.' Additionally, photographic printing

quality spans the entire tonal range for natural reproduction. Also, text is crisp, even at smaller font sizes. To see the process in action, click here to watch the short video, 'Imagine the evolution.' After printing, other features can be added, including brand protection, RFID, additional label layers to accommodate more content, and insert attaching to folding cartons to remove packaging line complexity.

02 / Get the benefits of digital

Like the other switches from analog to digital processes, digital print production offers many benefits. Lead-time can be reduced to help producers meet changing customer demand. In some cases, they can be reduced to three days, two days, one day (or the even same day).

The digital process enables cost-effective short-run production that can easily match your consumption by production lot. Healthcare manufacturers can buy what they need without holding inventory, avoiding the risk of obsolescence. With multiplying SKUs, the cost of over-inventory adds up fast.

"Our goal is to reduce secondary packaging inventory and obsolescence to as close to zero as possible. With our move to a digital printing and a JIT delivery service, we are making great strides in accomplishing that goal."

- Manager, Supply Chain

Another benefit is 'content personalization.' Each label in a production run, for example, is unique. Because of this, brand owners can add variable content to each label, including variable bar coding by label for serialization or track & trace. Personalization can even go further to the brand marketing level. Brand leaders can easily add regional imaging or messaging, or even time-based campaigns that can literally change at the next production lot. Digital presents a different way of managing your brands.

"We found that with digital offset we could design more engaging graphics that stood out on the shelf over our competitors. Digital is a designers dream. Marketing is happy!"

- Graphics Manager

Further, digital enables quick and low-cost market testing with different graphics or packaging styles for labels and cartons at low volumes. Folding cartons are laser die-cut to help speed your prototypes and tests to market.

Sustainability is major concern for drug producers. With digital production, producers can eliminate significant landfill waste including: printing plates, ink, and paper or film substrates.

The benefits add up to a leaner supply chain that takes out significant total cost, speeds product to market, and increases graphics quality.

03 / Customer Stories – Just the Facts

Biopharma

CHALLENGES

- ✔ React faster to biologic batch production with last-minute labeling information
- ✔ Reduce obsolescence and working capital

BENEFITS OF DIGITAL

- Transitioned 20+ SKUs
- Reduced working capital & obsolescence by 80%
- Reduced lead times to <5 days
- Reduced prepress costs by eliminating printing plates

Consumer Health

CHALLENGES

- ✔ Achieve corporate lead time reduction goals to meet changing customer demand
- ✔ Enhance brand graphics in the competitive consumer health market

BENEFITS OF DIGITAL

- Transitioned brands to digital
- Reduced lead times to <5 days & established a custom service strategy
- Exceeded package graphics expectations by eliminating trapping design limitations

Natural Health

CHALLENGES

- ✔ Reduce inventory for 108 SKUs, 25 label sizes & 432 total annual flexo production runs

BENEFITS OF DIGITAL

- Transitioned brands to digital
- Met & exceeded inventory goals with a custom service strategy
- Rescued 6,742 lbs. of annual wasted material from landfills [74% reduction]

04 / Getting Started

It's a simple process to transition from conventional to digital print production:

1. Color match brand graphics on the exact substrates being printed and create a color formula profile
2. Take the opportunity to design graphics without trapping and using images with 100% tonal range
3. Perform all required package performance testing

4. Approve and update package specifications if needed
5. Establish a custom service strategy based on the specific objectives for production planning, quality assurance, and supply chain

The printed packaging converter will establish a project management plan to guide the transition process from the idea phase, through approvals, all the way through packaging line qualification. Once qualification is completed, establishing a top-down, actively managed custom service strategy is crucial to maximizing results. Service can be combined with Certified Supply to reduce incoming quality assurance so packaging can quickly to the production line.

On a final note, you should select a converter partner that has experience and a track record of success in digital printed packaging conversion with a deep history of production.

Click here to watch a short video, “Imagine the evolution.”

ABOUT THE AUTHOR

Joe Tenhagen is Director of Marketing, North America for CCL Healthcare. (609-490-3032; jtenhagen@cclind.com). CCL is a $2.5 billion + global provider for printed packaging with both conventional and digital printing. **CCL has invested in more than 40 HP indigo presses worldwide and is committed to meet the changing needs of the Healthcare Industry**. For more information on digital printing for pharmaceutical packaging, visit www.cclhealthcare.com/imagine.