

EXPLORING THE BENEFITS

OF DIGITALLY PRODUCED PACKAGING

Does this conversation sound familiar?



How can digitally produced packaging add value?



Reduce Cost

- Minimum inventory
- Volume based on demand
- Reduced obsolescence*
- Market testing

Reduce Risk

- Revision control
- Just-in-time production
- Volume based on demand
- Global G7 color management

Sell More

- Reduced time to market*
- Localized versioning
- Cause-driven promotions
- Event driven promotions
- Product lifecycle management

Environment

- Reduce landfill waste
- Reduce carbon emissions
- Reduce obsolescence
- No hazardous chemicals
- Reduce energy consumption

*Compared to conventional print methods

Digital print is a direct-to-board print technology

- No print plates required
- Full CMYK color spectrum
- Single-pass, litho-like quality
- Also available for **pressure-sensitive labels!**



With digital, you can produce...



What You Want

- Low MOQs
- No print plate charges
- Inventory management and obsolescence – solved!

When You Want

- Print based on real sales, not distant projections
- Order based on demand down to the SKU level
- Determine frequency based on your packing line schedule

How You Want

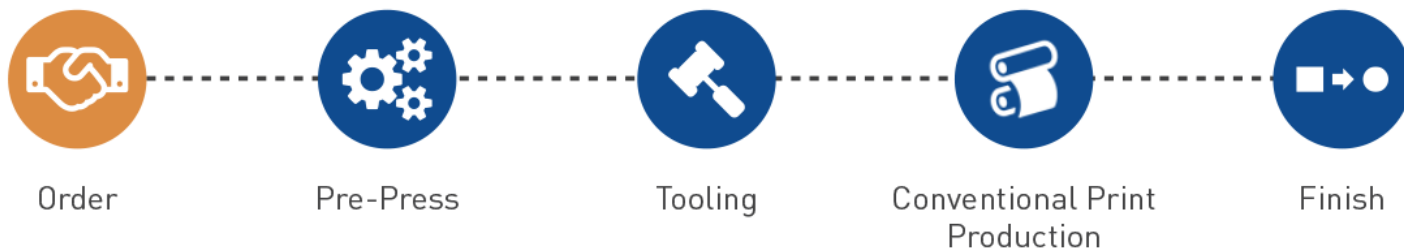
- 100% revision control every time you print
- Personalization, cause-based marketing, regional or holiday messaging, serialization – as easy as hitting “PRINT!”

DIGITAL PRODUCTION

AGILE BY DESIGN

Digital production eliminates print plate tooling...

CONVENTIONAL PRINTING



DIGITAL PRINTING



RESULTS



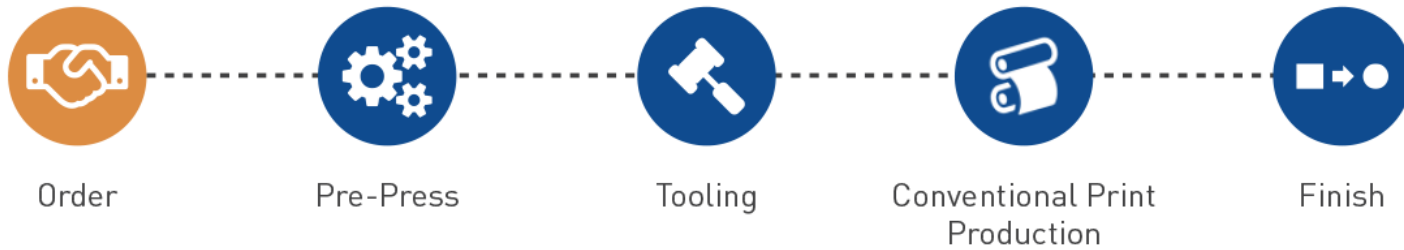
High Volume of Standardized Units



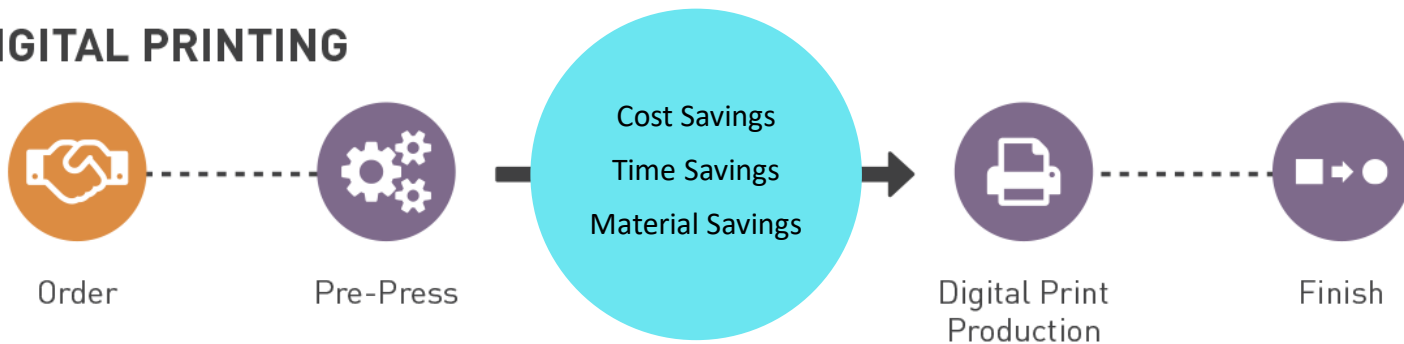
Wide Range of Choices!

...and adds value!

CONVENTIONAL PRINTING



DIGITAL PRINTING



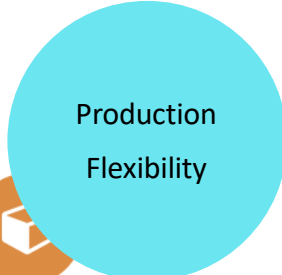
RESULTS



High Volume of Standardized Units

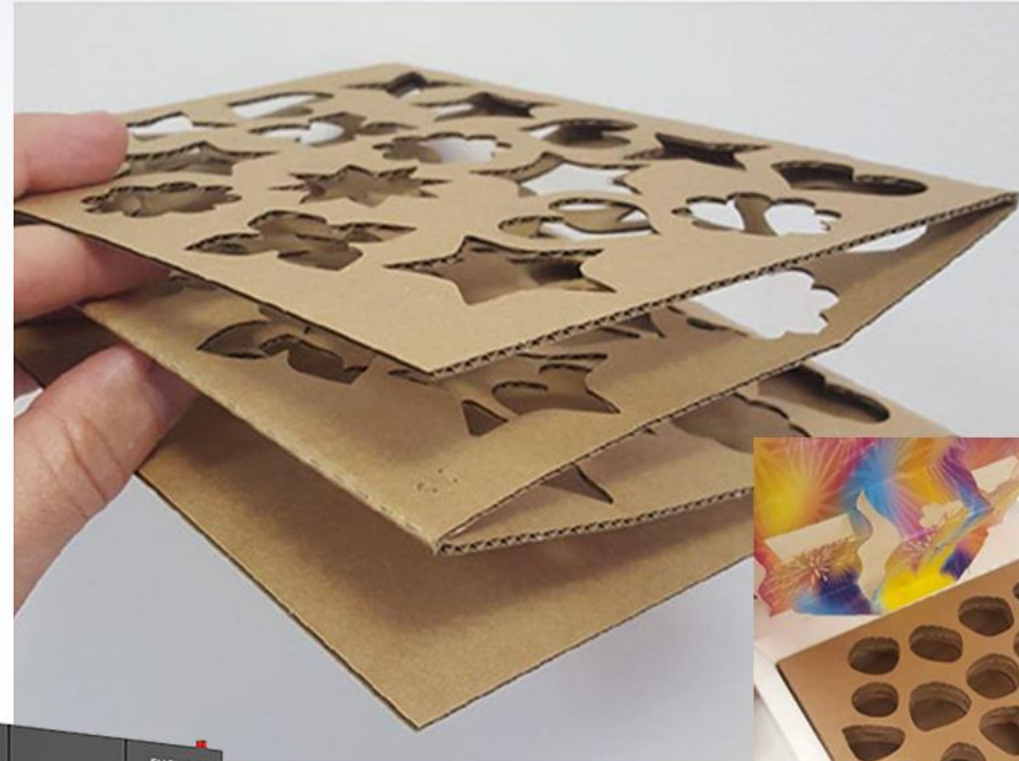


Wide Range of Choices!



Laser Cutting and Creasing

- Extremely high-speed conversion technology
- Leverage shape as a differentiator
- Supports a range of run lengths – small to large
- Cut-outs, designer perforations, etching and more
- Fine tune elements such as zipper pulls, inserts, and closures to your specific product and user needs





SUPPLY CHAIN BENEFITS

OF DIGITAL PRODUCTION

Just enough, just in time.



What You Want

Reach an economical MOQ while ordering in manageable volumes

When You Want

Order what you need, when you need it.

How You Want

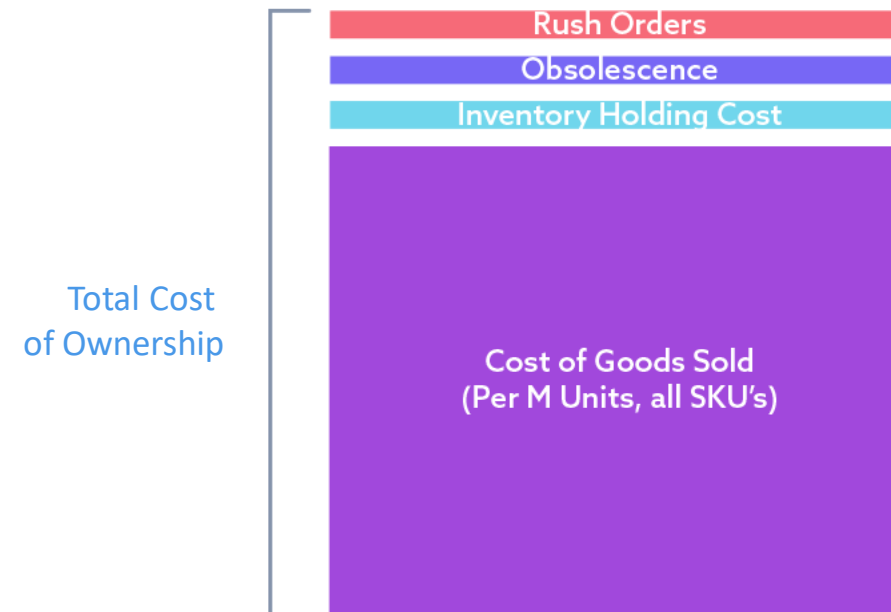
Reduced inventory = reduced warehousing.

Conventional vs. Digital Supply Chain Total Cost of Ownership

Litho-Lam Production



Digital Production



Conventional vs. Digital Supply Chain Benefits

Litho-Lam Production



Long Lead Time
(weeks)



High MOQs
(thousands)



High Initiation Costs
(prepress, tooling)



Make to Stock
(higher inventories)

Digital Production



Short Lead time (days)



Low MOQs
(as few as 1!)

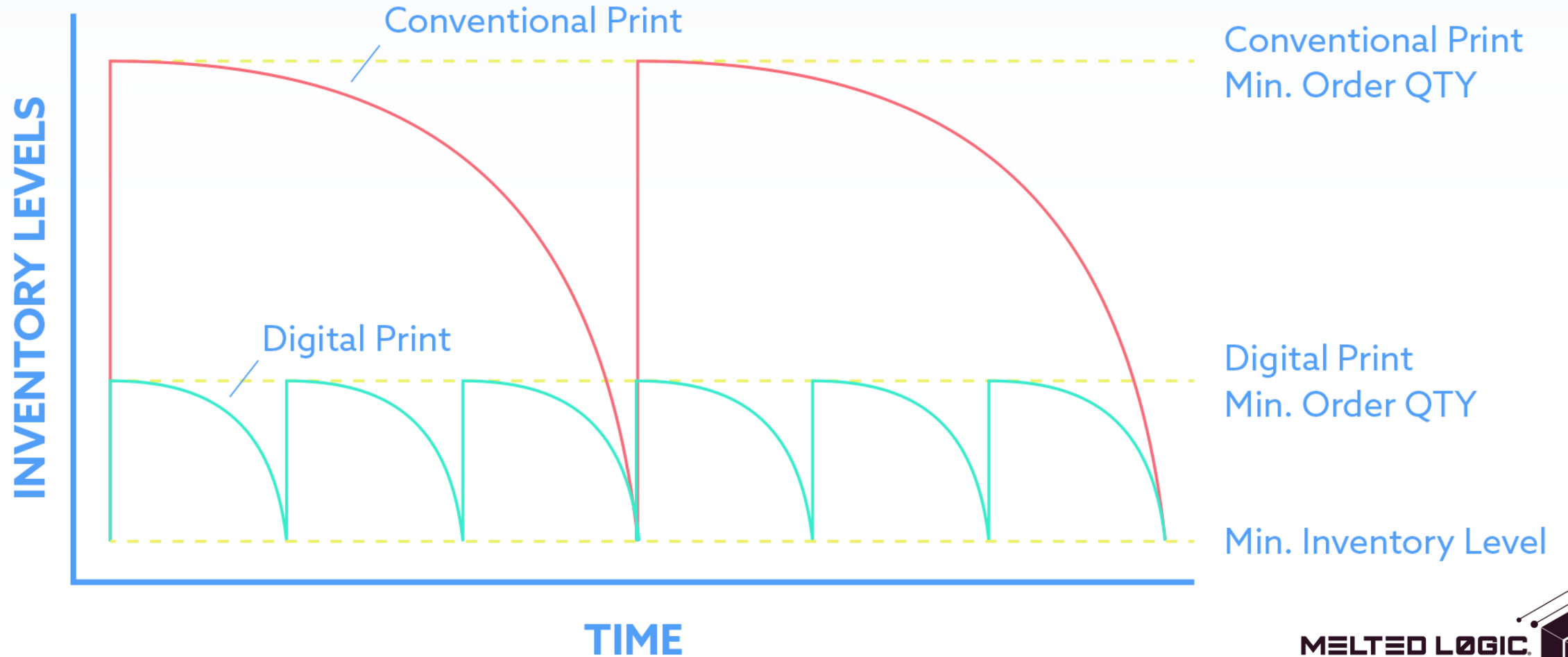


Low Initiation Costs



Make to Order
(minimal inventory)

Conventional vs. Digital Inventory Management



MARKETING AND SALES BENEFITS

OF DIGITAL PRODUCTION

EMERGING BRANDS ARE DRIVING CATEGORY

GROWTH

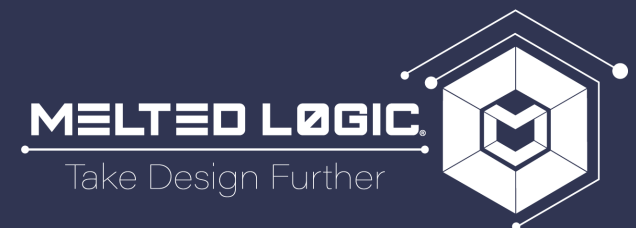
EMERGING BRANDS ARE DRIVING CATEGORY

GROWTH

How?

PACKAGING INNOVATION

Powered By Digital Production



Personalization

- Create a 1:1 connection with the consumer, boosting loyalty and brand buzz
- Powered by Variable Data Print (VDP), every box or label can be unique
- Text
- Photos
- Graphics
- Names
- ...any detail collected at purchase or uploaded by the customer!



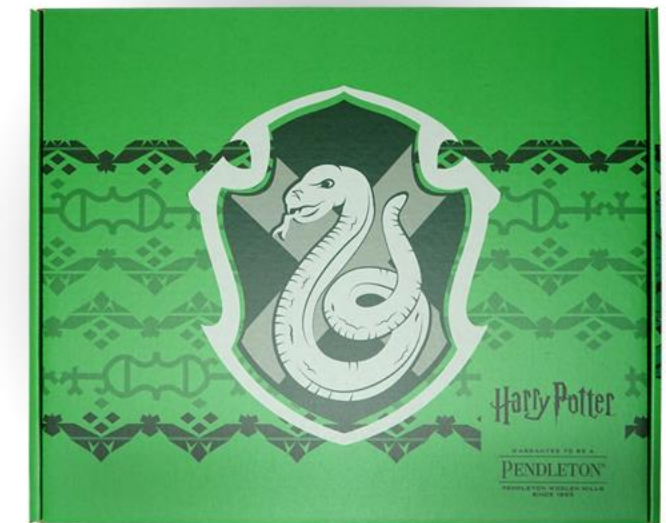
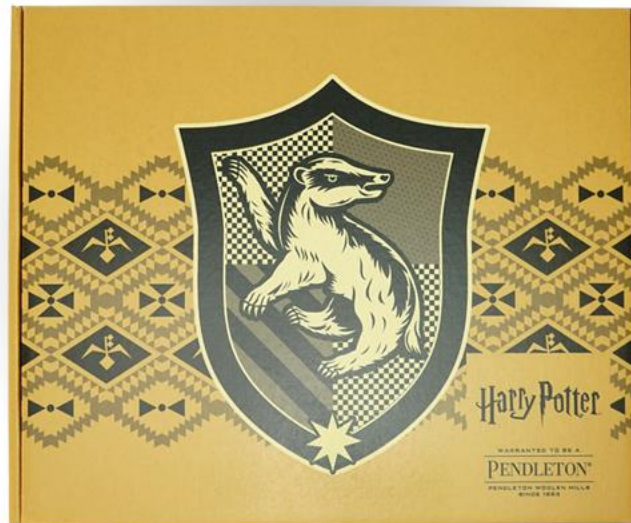
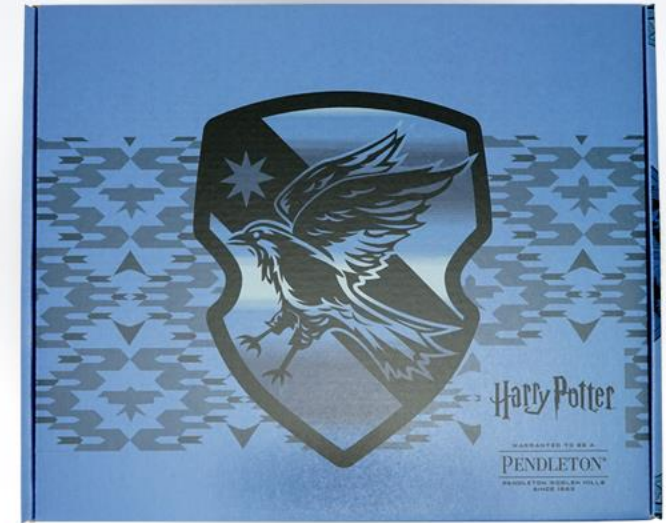
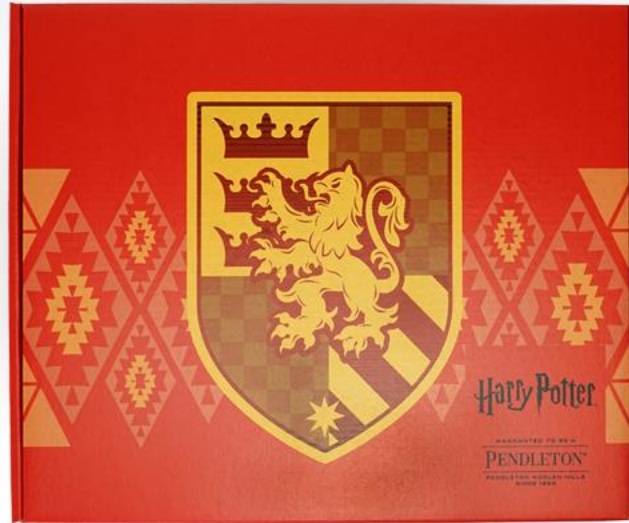
Cross-Promotions

- Can be specific to end user based on purchase data
- Upsell additional products complimentary to what the customer has already bought
- Align marketing timing to purchase events
- A/B testing
- Promote exclusive sales, products, and more



Versioning

- Same structure, different artwork
- Replenish based on demand down to the SKU level
- Test market different designs to see what sells through best



Cause Marketing

- Easily create co-branded prints on your packaging, labels, and displays
- Align your physical assets to your digital marketing campaigns
- Align your brand identity with causes that your consumers care about, boosting loyalty



HP SmartStream Mosaic

- Achieve infinite on-brand design iterations with no additional effort from your design team
- HP Mosaic leverages a single vector-based source file of “seed art” to create endless unique printing impressions
- Available for corrugated boxes, displays, and custom labels



Extended Content

- Add QR codes to drive consumer engagement beyond the printed pack
- Delight consumers with digital content that drives traffic to your website, app, etc.
- Make your product easier to buy with relevant coupon offers, instructional videos, social proof, and more
- Manage product recalls and consumer experience post-purchase with ease



SUSTAINABILITY BENEFITS

OF DIGITAL PRODUCTION

Why does sustainability matter?



Consumers

Millennials and Gen Z prefer brands that protect the earth.*

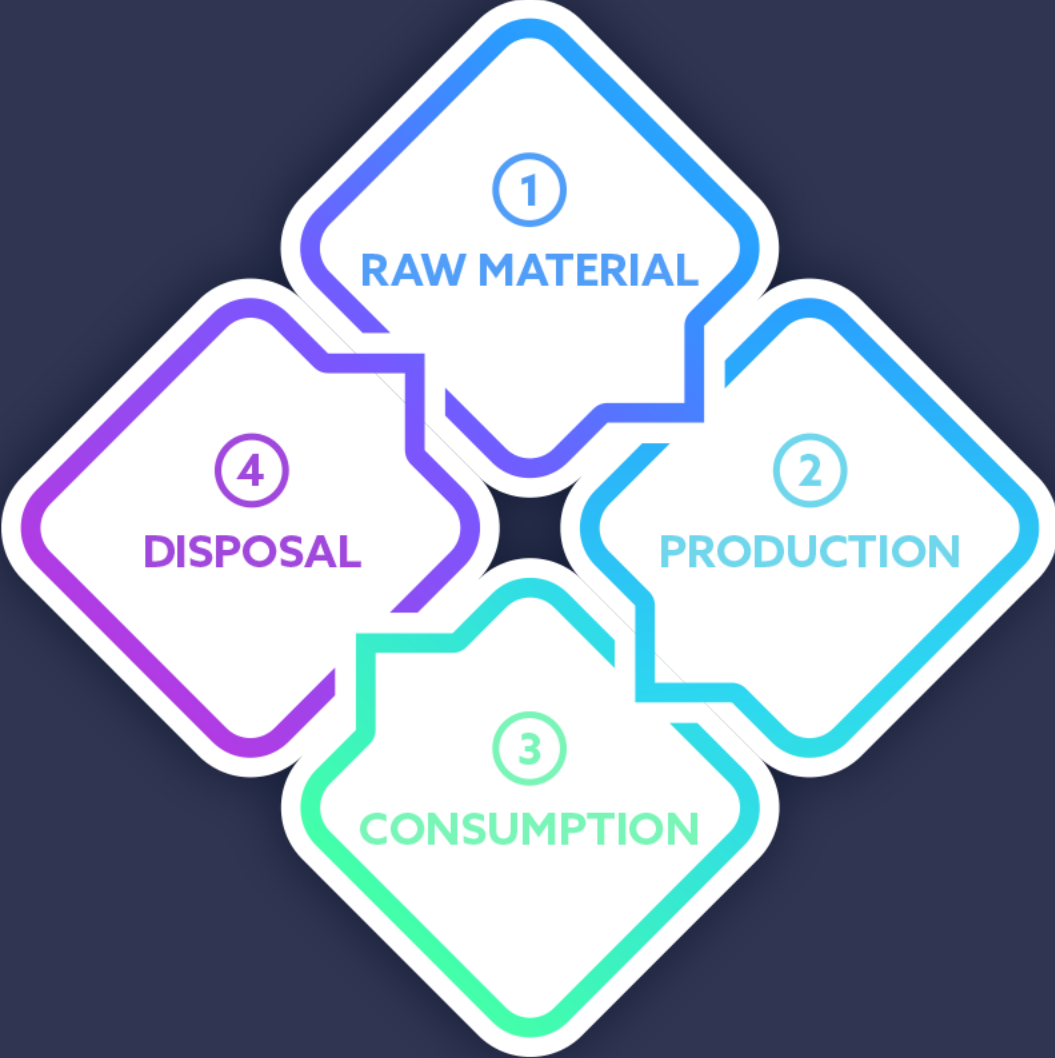
Governments

Governments are driving green initiatives.

Brands

Brands are responding to legislation and consumer demand.

From creation to disposal, digitally printed corrugated supports sustainability.



Responsibly Sourced and Developed Raw Materials

- 93% of corrugated material is recovered and recycled to make new boxes and displays
- HP True Water-Based Inks used on the HP PageWide C500 press contain no hazardous air pollutants*, meet stringent criteria for human health and environmental considerations**, and comply with EUPIA’s Exclusion Policy***



*HP A30 Inks and A50 Bonding Agent were tested for Hazardous Air Pollutants, as defined in the Clean Air Act, per U.S. Environmental Protection Agency Method 311 (testing conducted in 2013) and none were detected. HP CV150 Water Based inks and Bonding Agent do not contain Hazardous Air Pollutants (HAPs) intentionally added.

**Certification under UL Environmental Standard for Sustainability for Printing Inks (UL 2801) ul.com/environment ul.com/EL

***Summary of Environmental Attributes and Regulatory Summary and Statement of Regulatory List available upon request

Produce with Less Environmental Impact

- Print only what you need, when you need it – reducing obsolescence
- Economical job sizes mean less energy used, less media wasted, and less make-ready processes compared to traditional printing
- Digital printing uses fewer toxic chemicals for both printing and cleanup
- HP PageWide presses use less water with automatic press cleanup
- Digital print and finishing eliminates the need to manufacture, transport, and store traditional print plates and cutting dies, reducing raw material and energy consumption



LESS
WASTE



LESS WATER &
HARSH CHEMICALS



REDUCED CO2
EMISSIONS



Food-Safe Consumption Use

- Meet consumer safety demands with HP True Water-Based Inks (C500 press only), which are 100% free of UV-reactive chemistries and are safe to use on non-contact corrugated packaging
- Meet brand safety requirements – HP PageWide print meets the EU framework for food packaging, Nestlé guidelines and Swiss Ordinance



Earth-Friendly Disposal

- Peace of mind with standard end-of-life disposal for corrugated products
- HP Digital corrugated packaging verified for standard recycling technology
- HP PageWide inks certified as harmless to the composting process by Din Certco





MATERIALS AND PRINT

DISCOVER WHAT'S POSSIBLE

Corrugated Materials – HP PageWide C500

- Flutes F – B/C
- Uncoated #3 White
- Coated bright white
- Kraft

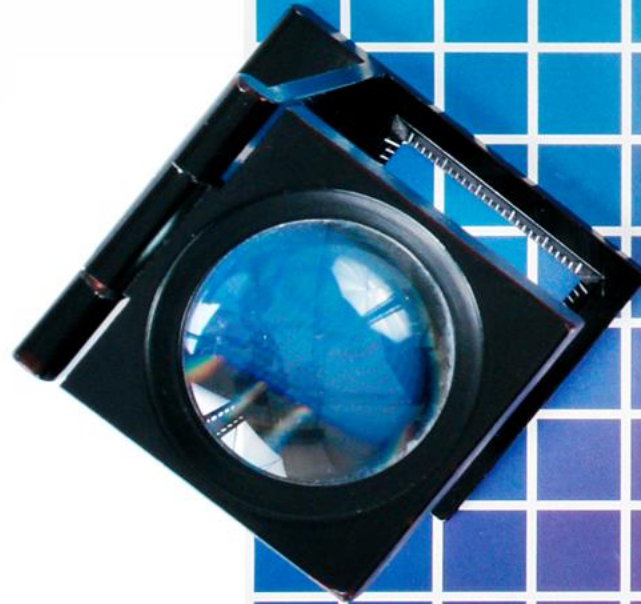
Corrugated Materials – HP Scitex

- All C500 materials
- Falconboard
- ConVerd/MerlinBoard



Color Gamut and Consistency

- Extensive Pantone swatch library matching
- G7 Certification ensures consistent print results from run to run and across machines
- Color swatch sampling on request



Print Finishes – HP PageWide C500

- Flood Over-Print Varnish

Print Finishes – HP Scitex

- Matte
- Gloss
- Spot Gloss

Matte



Gloss (Scitex)



HP PageWide C500 Press: Offset Quality Digital Print

- Print sharp text and barcodes and smooth tone transitions, with 1,200 nozzles per inch and 6-pl drops
- Maintain consistent print quality with 1 million nozzles and 6X nozzle redundancy
- HP PageWide True Water-Based Inks are 100% free of UV-reactive chemistries, meeting stringent food packaging standards
- Robust, trusted printing for a wide range of primary and secondary food packaging and sensitive products packaging - with no extra barriers needed



Retail Display Program

- Choose your style and add your graphics – dieline is ready for you
- 20 popular and proven structures to choose from
- Reduce lead time and get to market faster
- Low minimums, no cutting die charges!



LET'S GET

STARTED

MELTED LOGIC

Take Design Further



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