



Key Takeaways from Digital Packaging: Opportunities to Thrive Research Study

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■ KEY TAKEAWAYS DIGITAL PACKAGING: OPPORTUNITIES TO THRIVE

AGENDA

- **About the Study**
- **Takeaway 1:** *Digital Printing Adoption Is Expanding*
- **Takeaway 2:** *Brand Owners Are Driving Demand for Digital Printing*
- **Takeaway 3:** *Digital Printing Meets Today's Productivity & Creativity Requirements*
- **Takeaway 4:** *Brand Owners Prefer Providers with Digital Printing Capabilities*
- **Takeaway 5:** *Opportunities Exist Across Packaging Applications*
- **Conclusions**



NAPCO RESEARCH/PRINTING UNITED ALLIANCE ECONOMICS TEAM

Nathan Safran
Vice President, Research



- Former Forrester Research Analyst
- Deep experience designing custom research solutions that solve business problems
- Research cited in Wall Street Journal, Reuters and Fortune Magazine

Lisa Cross
Principal Analyst



- 20+ year print industry research, analysis and reporting experience
- Award winning industry journalist
- Extensive experience using research to solve customer business challenges

Andy Paporozzi
Chief Economist



- Former NAPL Lead Economist
- Developed *State of the Industry* research series and *Capital Investment Report*
- Internationally in-demand public speaker on economic factors impacting the print industry

Cory Francer
Analyst



- Packaging industry specialist
- Served as editor-in-chief of *Packaging Impressions* for seven years
- More than a decade of experience as a professional reporter

Evan West
Data Analyst



- Experienced data analyst with deep trends and data analysis experience
- Skilled in analysis of business problems to drive revenue producing outcomes
- Skilled big-data practitioner

Onamica Dhar
Economist



- Experienced in economic analysis, forecasting, and reporting.
- Former survey analyst at the Center for Supply Chain Management, Marquette University.

■ ABOUT THE STUDY: RESEARCH METHODOLOGY

- The study surveyed packaging printers and converters across all applications, along with brand owners to gauge their perspectives and usage of digital production technology.
- NAPCO Research designed and deployed 2 surveys: one survey sent to packaging printers and converters, while the other was sent to brand owners.
- Respondents were offered an incentive to drive participation.

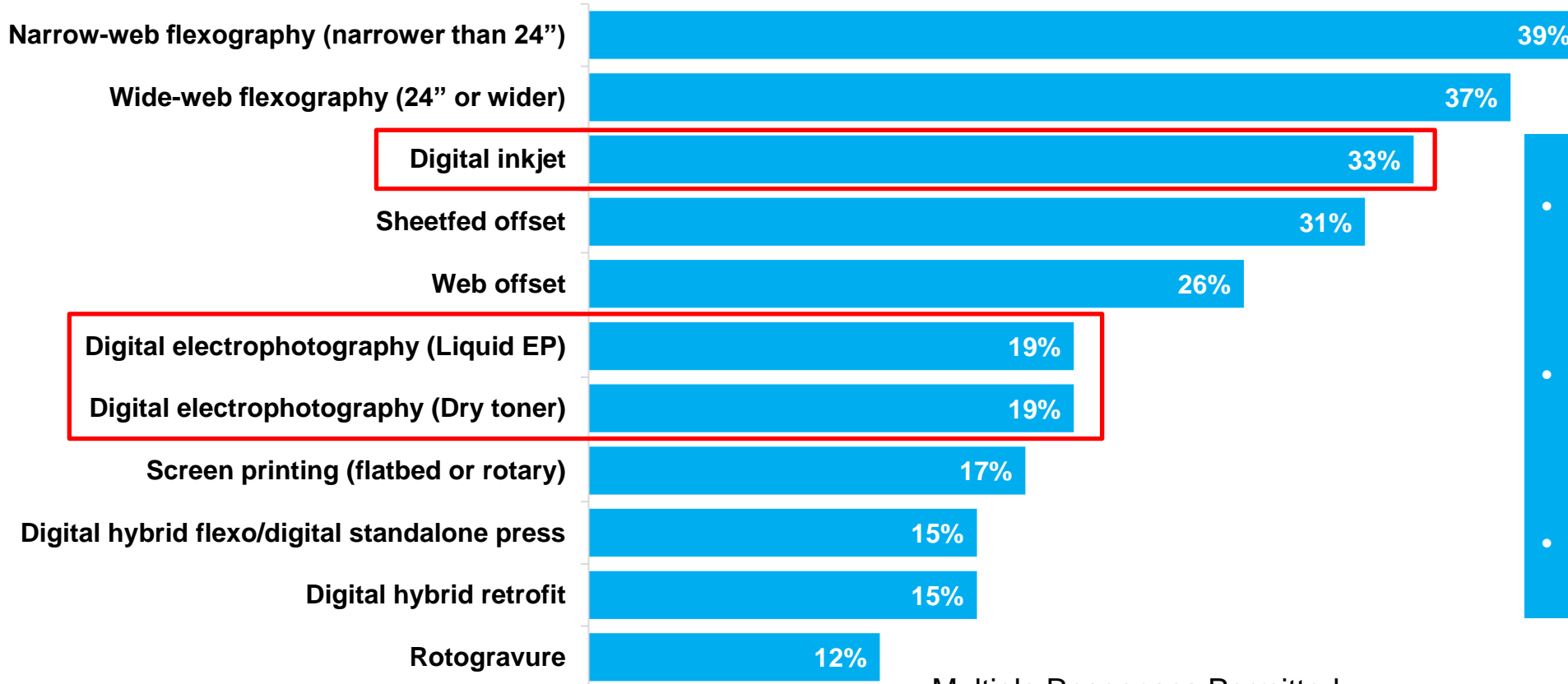
Number of Survey Completes

Segment	Response
Packaging Printers and Converters	104
Brand Owners	93

TAKEAWAY 1: DIGITAL PRINTING ADOPTION IS EXPANDING

DIGITAL ADOPTION IS EXPANDING IN PACKAGING

Q. Which of the following printing technologies does your company use in house to print labels and/or packaging?



KEY FINDINGS

- Flexography most widespread but digital has become mainstream.
- One-third of respondents printing packaging with inkjet technologies.
- Nearly 20% use liquid EP, dry toner, or both.

n = 104 package printers

Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

Multiple Responses Permitted

ASSESSING DIGITAL PRINT USE BY APPLICATION

BY THE NUMBERS

Percentage of Respondents Using Digital by Application

- Prime label, n=44, 64%
- Folding carton, n=40, 60%
- Flexible packaging, n=50, 42%
- Corrugated
 - Preprint, n=20, 50%
 - Postprint, n=22, 41%

n = 104 package printers

Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

- Respondents from ALL packaging segments use digital production technologies.
- Digital is moving beyond label and folding carton printing (where most prevalent) and making strides in corrugated, flexible packaging, shrink sleeves, and other applications.
- Label continues to lead the way and is as an indicator of the direction of the industry.

■ TOP 5 BENEFITS DIGITAL PRINTING DELIVERING TO PROVIDERS

Converters that print labels and packaging on digital presses report the following are as the most important benefits:

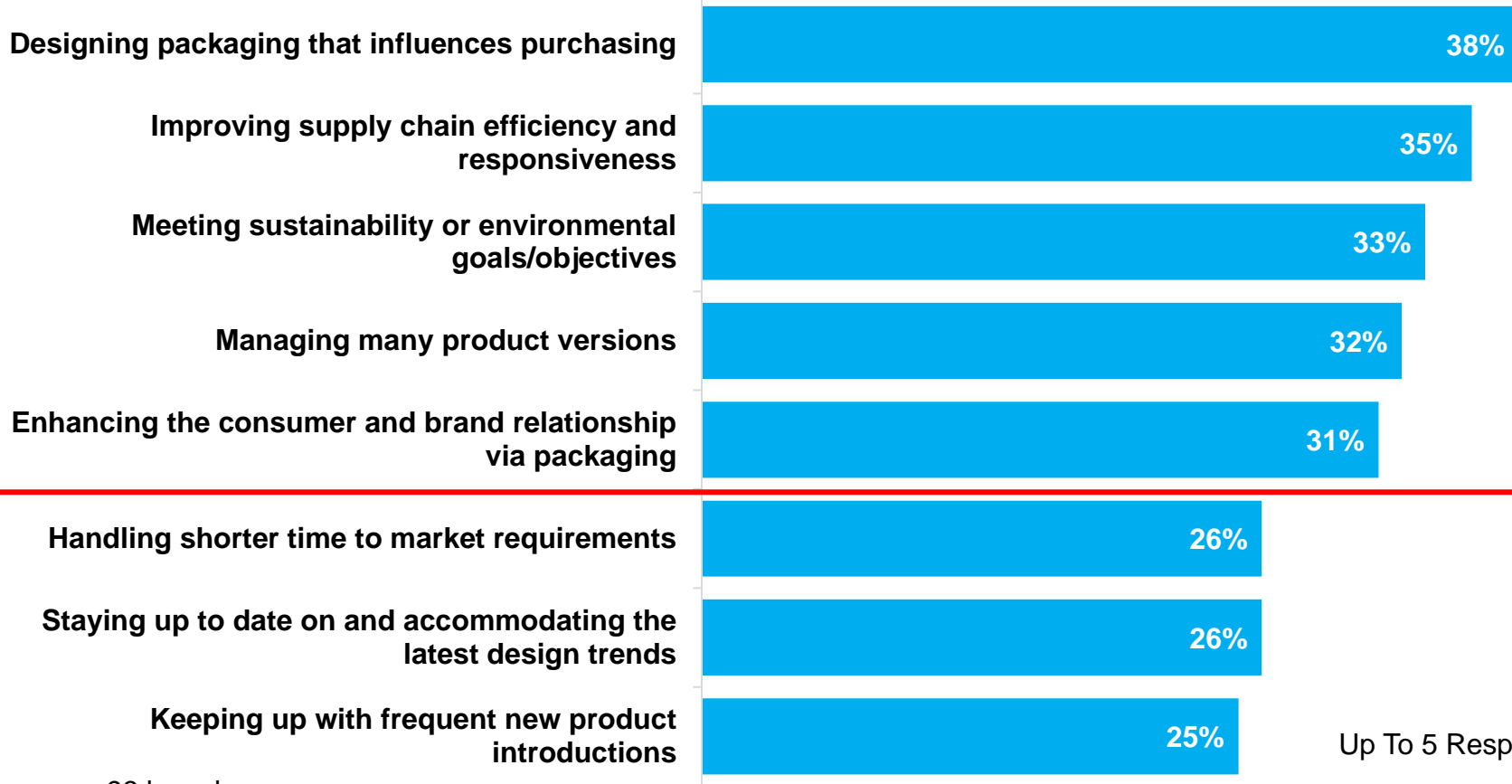
1. Meeting customers' short-run production needs
2. Accommodating customer demand for faster turnaround
3. Printing multiple versions in a single print run
4. Ability to personalize
5. Elimination of plate and tooling production and costs

n=58 packaging printers that use digital printing to print labels and packaging
Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

TAKEAWAY 2: BRAND OWNERS ARE DRIVING DEMAND FOR DIGITAL PRINTING

BRAND OWNER CHALLENGES ALIGNED WITH DIGITAL ADVANTAGES

Q. What are your company's top packaging challenges?



MEETING THE CHALLENGES
Digital printing addresses top packaging challenges because it enables affordable short-run production, fast turnaround, variable-data printing, and reduced process waste.

Up To 5 Responses Permitted

n = 93 brand owners

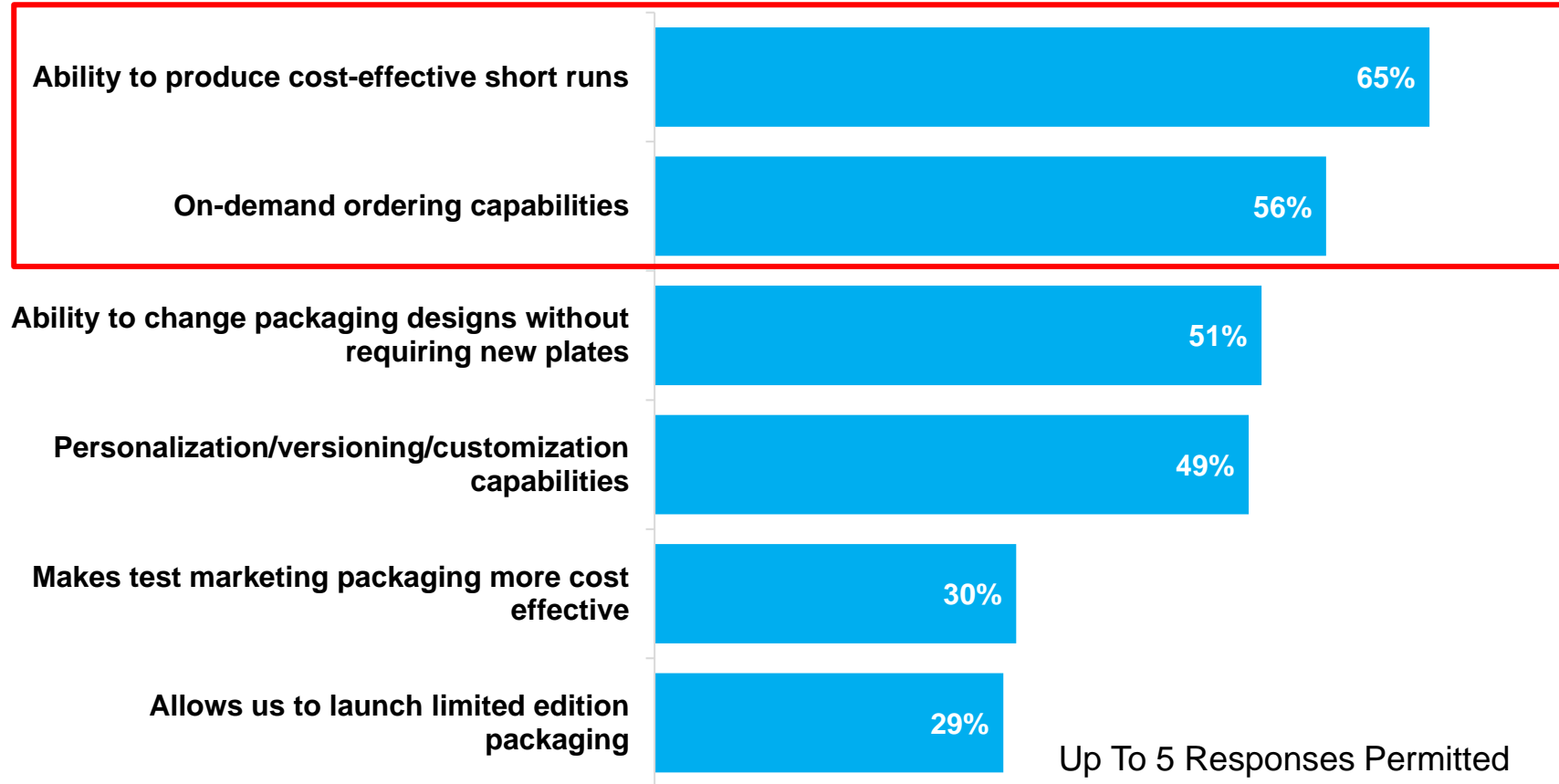
Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

WHAT DO BRANDS VIEW AS DIGITAL PRINTING'S TOP BENEFITS?

Q. Which of the following do you view as digital printing's top benefits?

DIGITAL BENEFITS TO BRANDS

- Efficiency and cost advantages are top benefits.
- Creative components of digital are also highly valued.
- Test marketing and limited-edition packaging launches are also benefits.



n = 93 brand owners

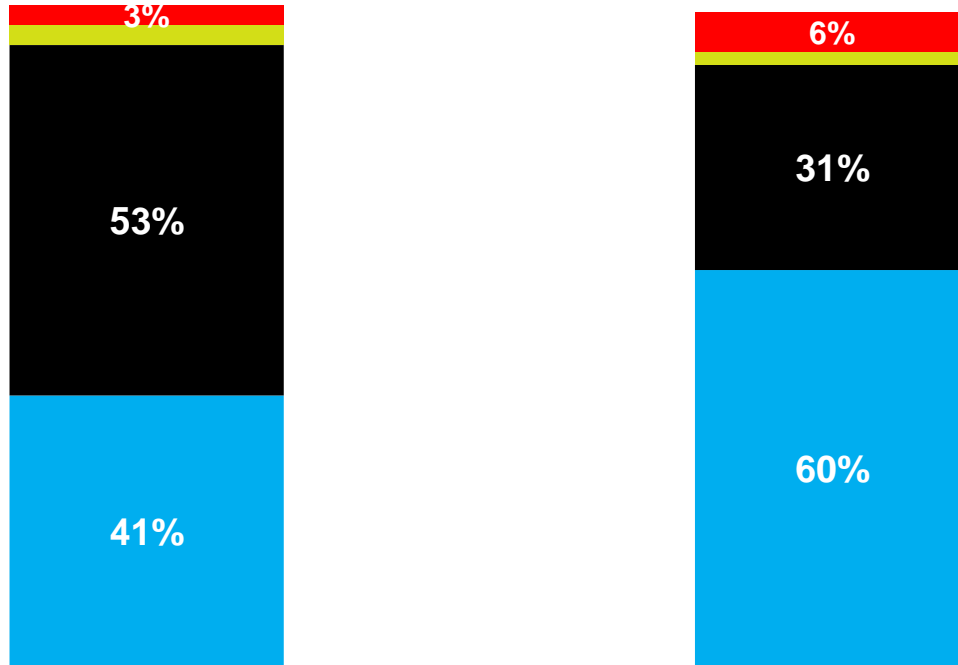
Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

BRANDS EXPECT INCREASES IN SKUS AND VERSIONS

Q. Which of the following best describes the quantity of your packaging stock-keeping units (SKUs) in the past 24 months?

Q. How do you expect the quantity of your packaging stock-keeping units (SKUs) to change in the next two years?

■ Growing ■ Staying the Same ■ Declining ■ Don't know



Past 24 Months

In 2 Years

KEY FINDINGS

- Brands anticipate SKU quantities will increase.
- 41% indicate their SKUs increased over the past two years.
- 60% expect an increase over the next two years.
- Why? 75% report customer demand for more variety driving increases in SKUs and versions.

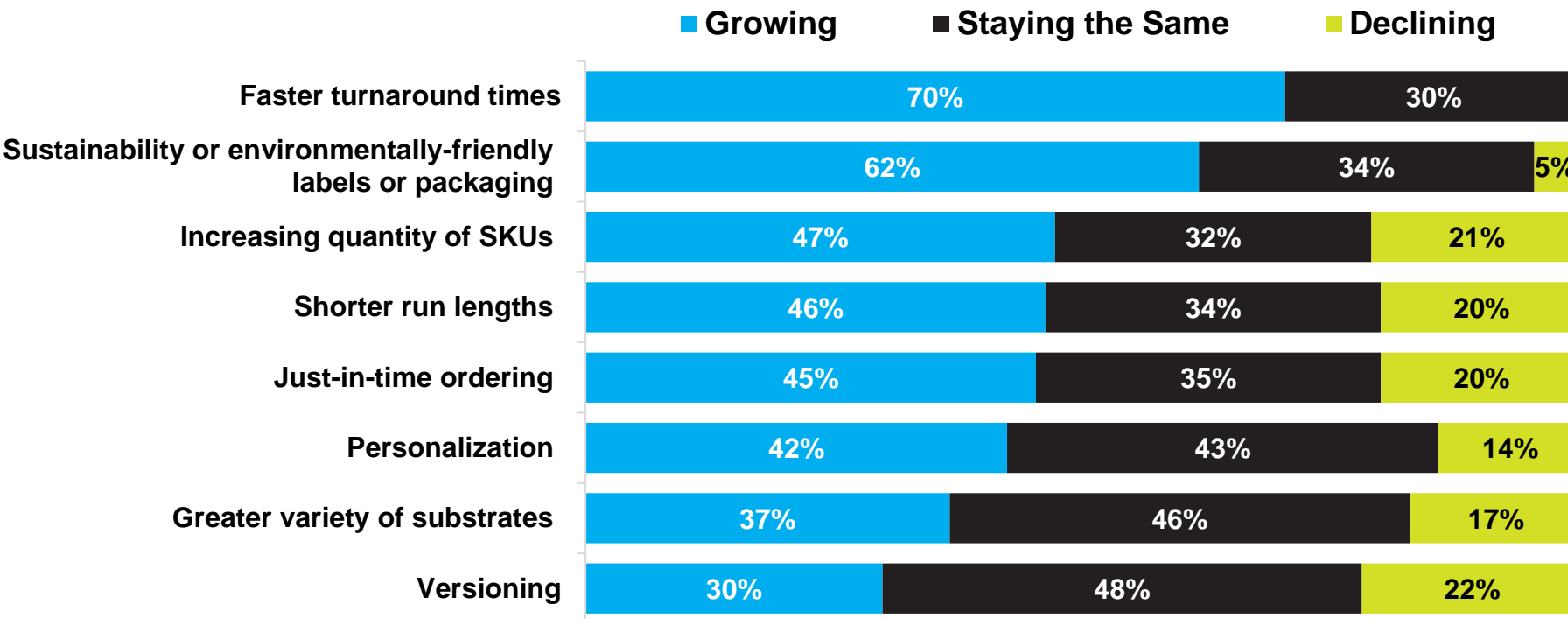
n = 93 brand owners

Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

TAKEAWAY 3: DIGITAL PRINTING MEETS TODAY'S PRODUCTIVITY & CREATIVITY REQUIREMENTS

BRAND OWNERS DEMAND SPEED, SUSTAINABILITY, MORE SKUS

Q. Please indicate if demand from your label and packaging customers for the following requirements is growing, staying the same, or declining.



KEY FINDINGS

- 70% of converters report growing customer demand for turnaround times.
- Nearly half of converter respondents (47%) report growing demand for increasing SKUs.
- 42% are experience growing demand for personalization.

n = 104 package printers

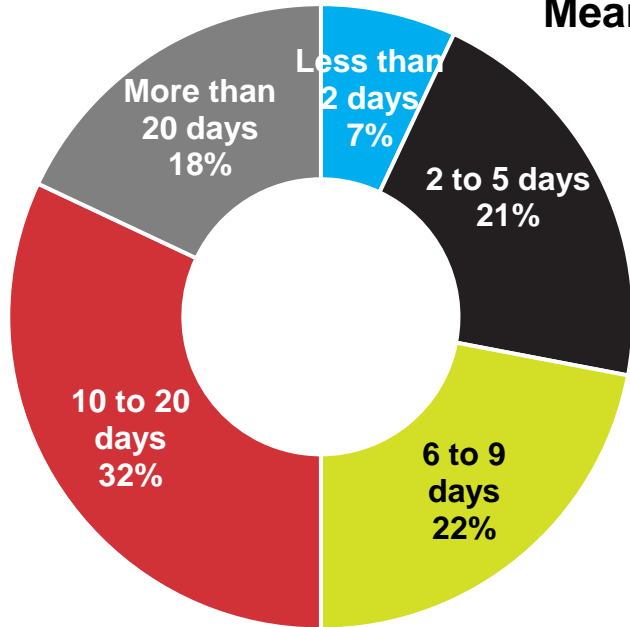
Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

FAST TURNAROUNDS REQUIRED

Packaging Printers

Q. What is your typical turnaround time for producing labels and packaging?

Mean 11 Days

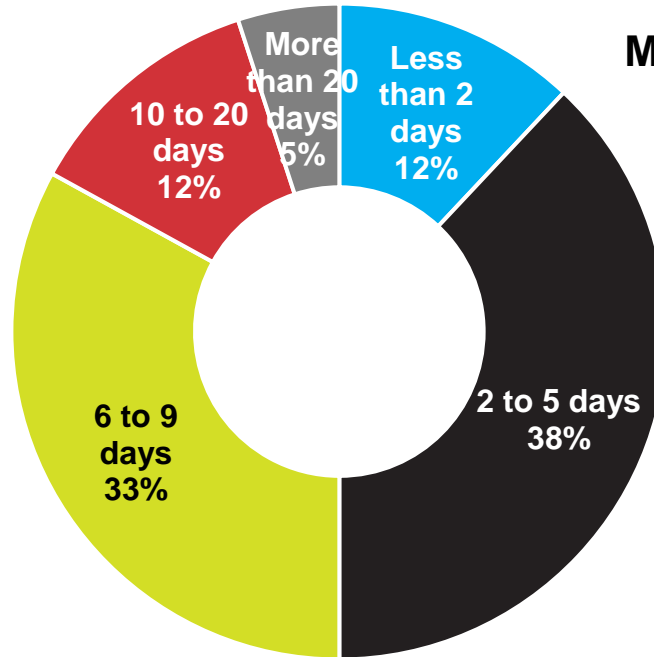


n = 104 package printers

Brand Owners

Q. What is your typical turnaround time requirement for labels/packaging after file submission?

Mean 7 Days



n = 93 brand owners

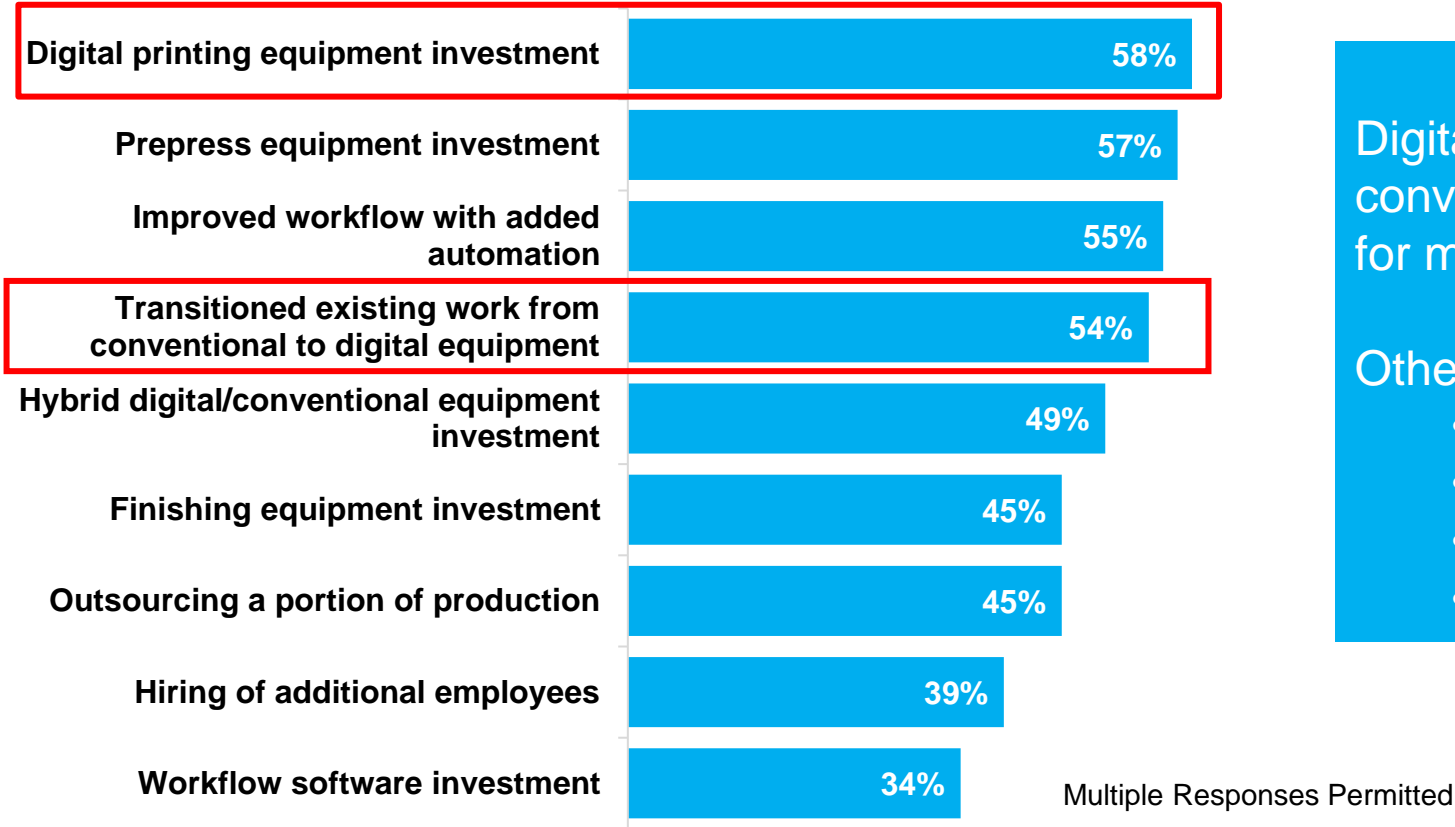
KEY FINDINGS

- On average, brand respondents require turnaround times four days faster than packaging printers/ converters are delivering.
- Extended delivery times were an impact of the pandemic, as converters dealt with backups and material shortages.
- Digital equipment can help bridge the turnaround time gap.

Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

INVESTING IN DIGITAL TO ACCOMMODATE BRAND DEMANDS

Q. What strategies has your company taken to accommodate the increase in number of label and/or packaging versions?



KEY FINDINGS

Digital investment and transitioning conventional work to digital are top strategies for meeting increased demand for versioning.

Other key strategies include:

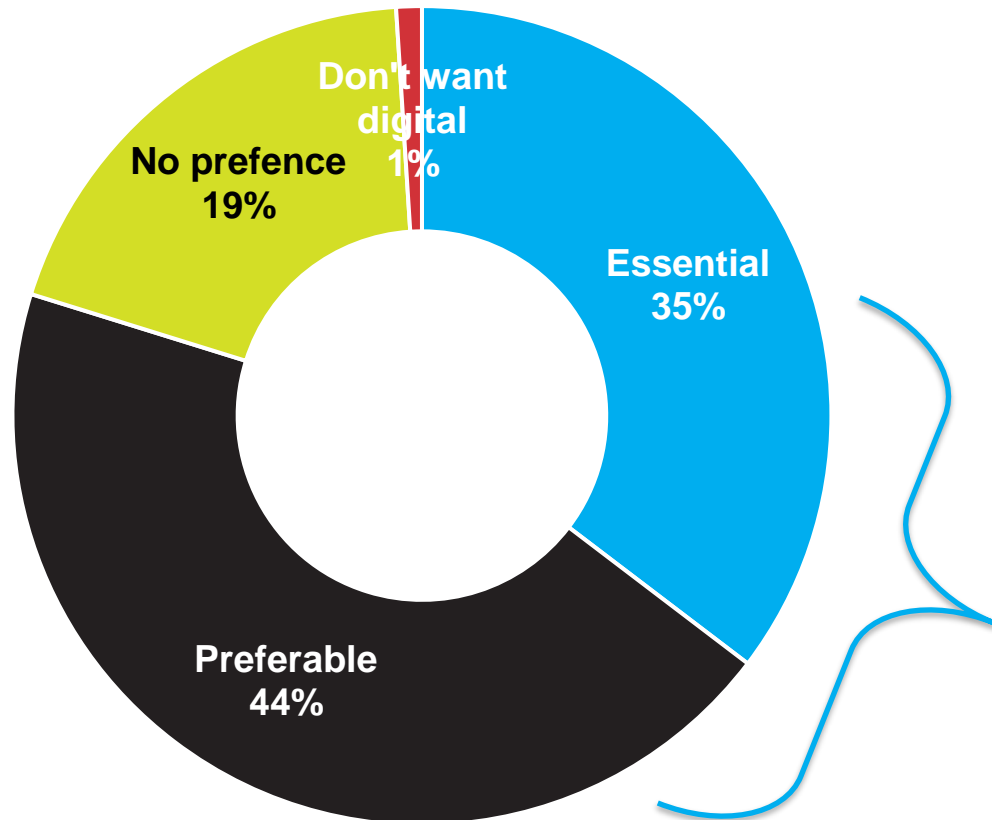
- Prepress equipment investment
- Added workflow automation
- Hybrid equipment
- Finishing equipment

n = 67 package printer respondents that indicated demand for versioning has increased over the past 2 years
Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

**TAKEAWAY 4: BRAND OWNERS
PREFER PROVIDERS WITH
DIGITAL PRINTING CAPABILITIES**

BRANDS WANT TO WORK WITH DIGITAL PRINT PROVIDERS

Q. How important is it for your company to work with label and/or packaging print providers that offer digital printing?



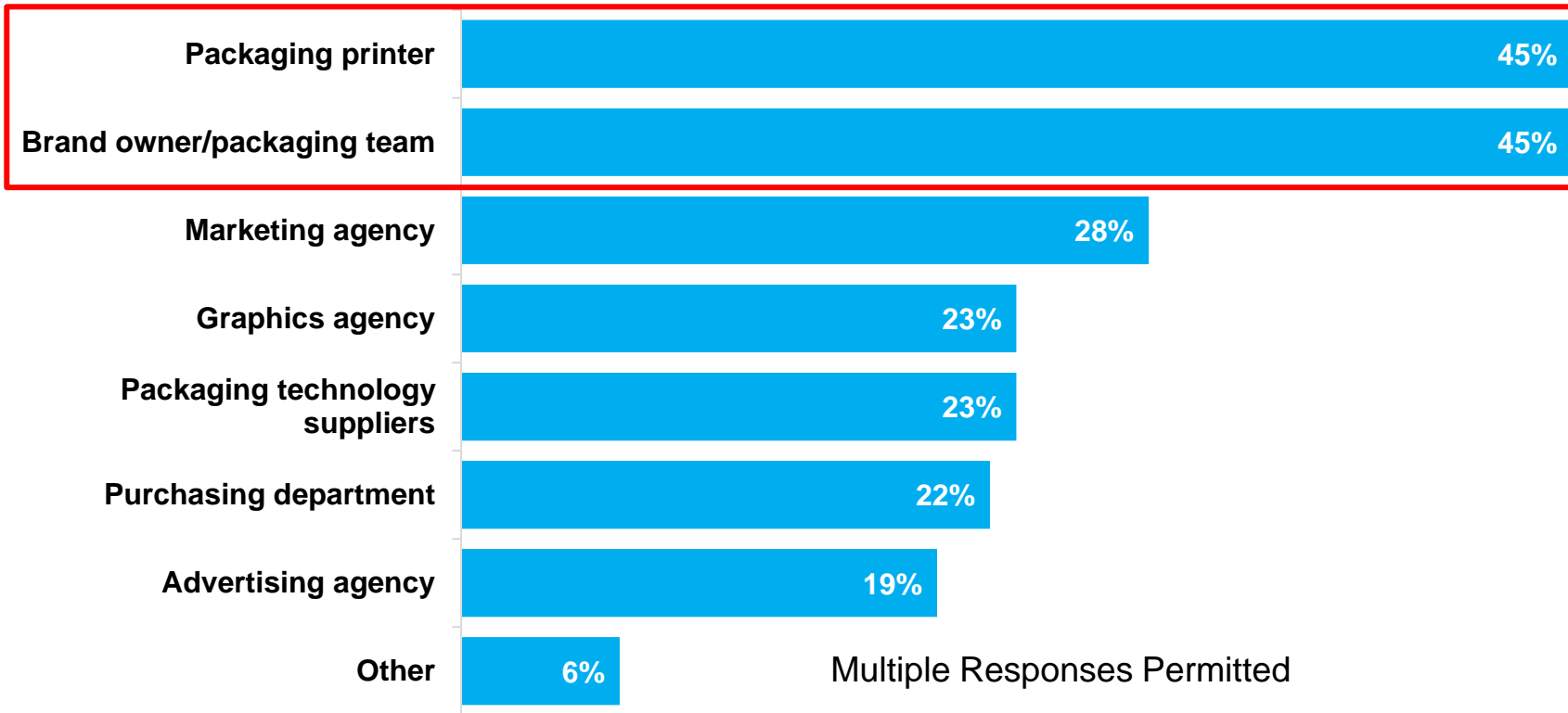
KEY FINDING
Nearly 80% indicate that digital is at least preferable when working with a package printer, and 35% report it is “essential.”

79% report it is essential/preferable to work with providers with digital printing capabilities.

n = 93 brand owners
Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

BRANDS RELY ON PACKAGE PRINTERS' EXPERTISE

Q. Which of the following providers do you rely on to determine the right printing process for your packaging and labels?



n = 93 brand owners

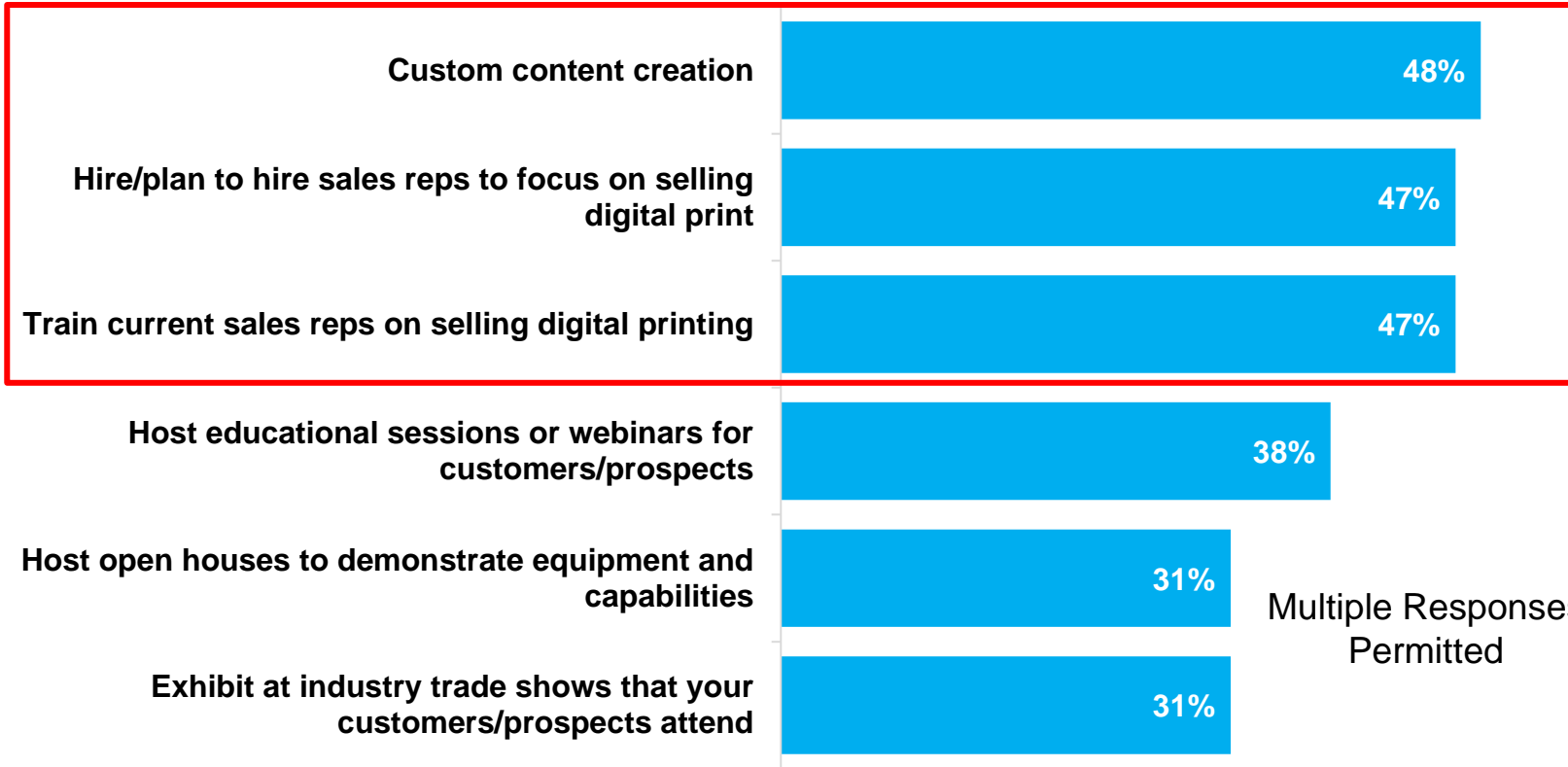
Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

KEY FINDINGS

- Brands view the print technology use decision as collaborative.
- 45% of respondents each selected package printers and their own internal staff as decision makers on what print technology to use.
- Communication early and often throughout the process is imperative to a successful result and a satisfied customer.

ACTIONS FOR SELLING DIGITALLY PRINTED PACKAGING

Q. Which of the following activities does your organization pursue to sell digitally printed packaging applications to brand owners, marketers, and key decision makers?



KEY FINDINGS

- Content creation and investing in expertise are top strategies for selling digital packaging.
- Nearly half of respondents state they have hired or plan to hire digital-focused sales staff.
- Custom content creation and educational sessions are also top sales strategies.

n = 58 packaging printers

Source: Digital Packaging: Opportunities to Thrive, NAPCO Research 2023

TAKEAWAY 5: OPPORTUNITIES EXIST ACROSS PACKAGING APPLICATIONS

DIGITAL OPPORTUNITIES ACROSS APPLICATIONS

- Use of digital printing is expanding across all packaging applications.
- When asked to indicate if their use of various packaging applications had grown, decreased, or stayed the same over the past 24 months, brands largely indicated increases or staying the same
- Corrugated boxes printed in full color were cited as a sizable growth opportunity, with 54% of brand owner respondents that use corrugated citing an increase.
- E-commerce opportunities and technological advancements have made corrugated an ideal packaging format for enhancing the brand and consumer connection.



Digital corrugated printing in action at Bennett Packaging. Image courtesy of Bennett Packaging via Packaging Impressions.

DIGITAL OPPORTUNITIES ACROSS APPLICATIONS

- Printing flexible packaging and shrink sleeves on digital presses are still in early stages, but fast growing among survey respondents:
 - 46% of flexible packaging respondents saw increased output in the past two years.
 - 42% of shrink sleeve respondents saw increased output in the past two years.
- As digital technologies emerge in these segments, it's an opportunity to extend the benefits of these applications to all brands.



Image via ePac



Image via Century Label

E-COMMERCE IS HERE TO STAY

- E-commerce has been on the rise and was experiencing an upswing prior to the pandemic.
- With e-commerce, brands have the ability to do 1:1 packaging. In the past, there was no way to know exactly who would be picking up a package from a shelf. Now, with e-commerce, brands have consumer names and can produce individually personalized packages.
- Per McKinsey & Co. research, the pandemic caused consumer intent to buy online to increase by 40% to 60%, and those behaviors are expected to continue.



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Photo via The BoxMaker

■ CONCLUSIONS

- Digital print growth opportunities are available in all packaging applications. While certain segments are further in their digital transition than others, understanding the benefits and use cases of each application can lead to collaboration with brands on successful digital implementation.
- Brand owners want providers that offer digital printing and rely on providers to help determine the right printing process for their packaging and labels.
- Digital's advantages include increased efficiency and productivity, along with creative opportunities for brand owners. Both are important.
- The market trends driving demand for digital printing of labels and packaging will continue. Brands expect SKU proliferation to continue, resulting in more short runs and increased versioning. E-commerce is expected to continue to impact the retail space, providing additional opportunities for digital.
- Many opportunities in digital printing of packaging to enable packaging and label print providers to thrive!



Thank You!

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