



**Digital Package
Printing:**
The Time is NOW!



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Digital Package Printing: The Time is NOW!

EXECUTIVE SUMMARY

Digital printing is the next frontier for packaging production, and brands and package printers/converters are capitalizing on its economic, efficiency, speed-to-market, and customization/personalization advantages. While digital printing has been used in the packaging industry for more than two decades, a combination of forces are expanding package printer/converters' and brand owners' use and recognition of its value.

Digital printing devices' ability to print high-quality output in affordable short runs have retailers, brand owners, marketers, agencies and package printers/converters taking notice. They see the production of labels and packaging on digital printing devices as an opportunity to expand product versions and improve customer engagement.

Digital package printing offers many benefits to brand owners and package printers/converters. Packaging is a growing market. While many printing markets are losing share to the Internet, packaging is a market that can't be digitized. Digital printing's ability to print shorter runs and more versions, fast and affordably, is supporting brand owners in their efforts to successfully sell products.

Brand owners are continually seeking new opportunities to engage with customers by offering a variety of product versions and customized messaging (i.e., seasonal promotions, regional products). Digital print technologies support brand owners in delivering product messaging and versions that appeal to consumers and compel purchasing.

Technology in the package printing industry is constantly evolving, and package printers are always looking for ways to gain a competitive advantage. Competition is increasing as commercial printers and other types of print providers are moving into packaging. Digital printing is enabling new entrants to offer package printing as a service.

Companies of all sizes can reap benefits from digital printing processes because they enable affordable short-run production of labels and packaging, allow for testing packaging concepts, deliver supply chain efficiency improvements and support faster time to market for new products.

NAPCO Research (a unit of NAPCO Media, the publisher of *packagePRINTING*) conducted a research study to qualify the digital printing opportunity in packaging production. The comprehensive research effort focused on trends, demands, challenges and requirements of brand owners — the packaging purchasers — and of package printers/converters — the packaging producers.



KEY FINDINGS

The research offers key insights on how digital printing is delivering value to brand owners and package printers/converters. The following is a summary of key research findings.

PACKAGE PRINTER/CONVERTERS MIGRATING TO DIGITAL

- More than half of package printer/converter respondents reported printing labels and/or packaging on digital printing devices for more than five years. The mean number of years respondents printed labels and/or packaging on digital devices was six years.
- Package printer/converter respondents operated a mix of digital and conventional printing technologies, indicating that both are essential to meet customer needs.
- Package printer/converters report that the top reason for not printing on digital devices is that it doesn't fit their product mix, reflecting that many package printers/converters rely on a high volume of long-run work.
- Interestingly, technology limitations were not a major obstacle in the adoption of digital printing devices.
- Outsourcing digital printing remains a viable option for firms that are either not yet ready to invest or are unable to find equipment that fits their needs.
- While a key business challenge for many package printers is accommodating decreasing run lengths, interview respondents noted the importance of having both digital and conventional printing equipment in their operations. They reported that they can economically accommodate customer demands for short-run work on digital equipment, while meeting longer-run requirements on conventional presses.
- When asked to identify the top obstacles for printing packaging and labels on digital printing devices, the top response (52%) was matching colors across digital and conventional equipment. Selling digital printing and size of run lengths were hurdles for a quarter of respondents.

BRAND OWNERS CHALLENGED TO IMPROVE SALES AND OPERATIONS

- Brand owner respondents identified developing compelling products, complying with regulations, customizing packaging, meeting environmental standards, adding security features and offering more personalization/customization as essential/high priority objectives. This finding points to areas of opportunity that digital printing can support.
- Brand owners identified improving their supply chains, managing frequent product launches, designing influential packaging, and managing versions as their top challenges.
- Close to half of brand owner respondents reported improving supply chain efficiency and responsiveness as a top challenge.

THE POWER OF THE PACKAGE

- 79% of brand owners agreed that packaging is a key marketing tool for their company and preferred to work with printers/converters that offer digital printing.
- Packaging is an important part of any company's marketing strategy and in many respects is the fifth "P" of the marketing mix.
- Packaging is a significant vehicle for presenting marketing messages to consumers at the point of consideration, purchase and delivery.

DEMAND FOR FASTER TURNAROUND

- More than half of package printer/converter respondents report demand for shorter turnaround and shorter run lengths is growing.
- Shorter production lead times for both printers and their customers is a key driver of investment in digital devices. Brand owners reported the typical turnaround time for labels and packaging after file submission is six days, even faster than the eight days package printer/converter respondents reported.

PACKAGING DEMAND CONTINUES TO GROW

- Brand owner respondents indicate that demand for many types of packaging applications continues to grow.
- Demand for prime labels is increasing, according to more than three-quarters of brand owner respondents that use this application. Brand owners report other important growth applications include flexible packaging (68%), shrink sleeves (60%), corrugated displays (57%) and corrugated boxes (55%).
- Brand owners reported that some portion of all of their packaging applications (labels, corrugated point-of-sales displays, corrugated boxes, folding cartons and flexible packaging) was printed on digital devices.

NUMBER OF SKUs CONTINUE TO INCREASE

- 60% of brand owner respondents reported that customizing or personalizing packaging resulted in a positive effect on sales.
- Close to three-quarters of brand owner respondents (73%) report SKUs are growing and the average number of SKUs for respondents was 85,000.
- Half of brand owner respondents indicated that the top factor influencing the growth in SKUs was keeping up with competitors.

SELLING IS MORE THAN ORDER TAKING

- When it came to deciding the right printing process for their packaging work, brand owner respondents turned to their package printers/converters (68%) most often for input.



- Brand owners have high expectations when it comes to choosing a packaging provider and require providers to offer ideas to improve a package's aesthetic appeal to consumers, while also offering insights for improving environmental footprint, reducing costs, and improving efficiency. Providing ideas or insights that yield positive results was an essential priority for 44% of brand owner respondents.
- The top five criteria brand owner respondents considered absolutely essential when selecting a package printer/converter were price, quality, sustainability, meeting deadlines, and understanding methods to thwart counterfeiting.

INTRODUCTION

For more than two decades, package printers/converters have known of the benefits of digital printing. Since the launch of the first digital devices, print providers of all types heard the marketing message that digital was the next evolution or frontier for print production as promises of enabling short-runs, printing variable data, and other benefits were made. The wide acceptance of digital printing technologies in the commercial market for producing a variety of applications (i.e., direct mail, brochures, postcards, sell sheets, transactional documents) serves as an indicator to the digital migration occurring in packaging markets.

Innovations in technology have prompted package printers/converters to investigate and invest in digital devices to complement existing equipment and pursue new offerings that yield benefits to brand owners. Label printing was the first packaging segment with significant adoption, and other applications appear to be following a similar pattern.

Digital printing offers important and transformational benefits to package printers/converters in better serving customers. The technology's ability to print affordable, high-quality work in shorter quantities, when needed, is supporting brand owners in more efficiently managing inventory and supply chains. In addition, retailers, brand owners, marketers, and agencies see the production of labels and packaging on digital printing devices as an opportunity to expand product versions and improve customer engagement.

NAPCO Research conducted this study, sponsored by the Specialty Graphic Imaging Association (SGIA), Fujifilm and Xeikon, to uncover the key trends and market influencers driving the use of digital printing. The comprehensive research effort focused on trends, demands, challenges and requirements of brand owners and packaging producers. This report offers a summary of key findings so that package printers/converters can use them to guide their digital printing investment decisions, marketing efforts, and customer sales discussions.



RESEARCH METHODOLOGY

STUDY OBJECTIVE

The overall research goal was to provide packaging printers, converters, brand owners, and equipment/software suppliers with key insights on the trends, benefits, and influences that are driving the digital transformation of the packaging market. The research takes a comprehensive approach in identifying key market trends driving demand and adoption of digital package printing through the study of both organizations that print packaging and those that buy/use packaging.

Key areas of focus include:

- The digital packaging opportunity.
- Key challenges facing package printers/converters.
- Brand owner requirements driving demand for digitally printed labels and packaging.
- Identification of packaging strategies marketers are pursuing to differentiate their brands.
- The role that digital package printing can play in addressing current and future market needs.
- Direction for packaging printers, converters and suppliers (digital press, software, media) on strategies for meeting the needs of marketers and brand owners.

RESEARCH EXECUTION PLAN

The study findings are based on the results of online Web surveys and in-depth telephone interviews conducted with package printers/converters and brand owners. The table below depicts the survey quotas and number of interviews completed.

	Online Web Surveys	Telephone Interviews
Marketers/Brand Owners/Agencies	266	5
Package Printers and Converters	140	5

Two separate surveys were fielded in November of 2018 to package printers/converters and brand owners. Respondents were invited via email to complete the survey and an incentive for participation was offered.

RESPONDENT DEMOGRAPHICS

PACKAGE PRINTERS/CONVERTERS

Package printer/converter respondents represented a mix of company types that printed a variety of packaging applications (Figure 1). Respondents tended to be larger companies with 41% of respondents employing 100 or more. The average size (mean) of companies participating was 62 employees. More than two-thirds (69%) of respondents printed labels and/or packaging products on digital printing devices.

Package Printer/Converter Respondents

Types of Companies

Primary Business	Number	Percent
Commercial Printer	45	32%
Label Converter	41	29%
Flexible Packaging Converter	18	13%
Folding Carton Converter	16	12%
Corrugated Converter	10	7%
Other	10	7%
Total	140	100%

Figure 1A
Q: Which of the following would best define your company?
N=140 Package Printers/Converters

Packaging Applications Produced

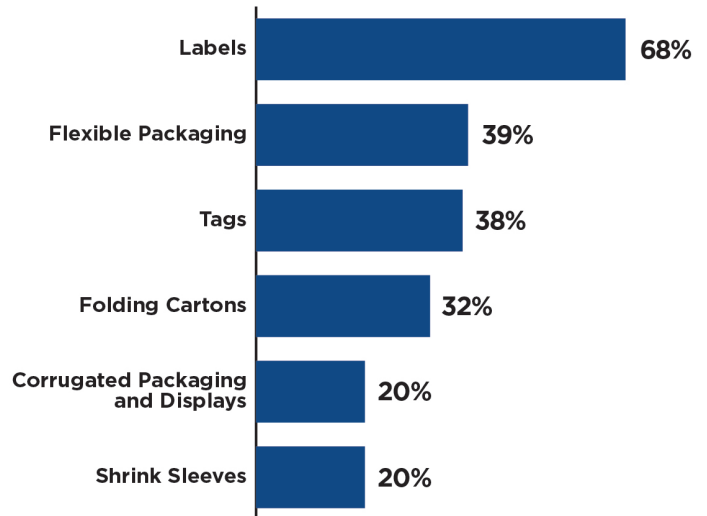


Figure 1B
Q: What types of packaging does your organization print?
N=140 Package Printers/Converters



More than half of package printer/converter respondents reported printing labels and/or packaging on digital printing devices for more than five years. The mean number of years respondents printed labels and/or packaging on digital devices was six years.

REASONS FOR NOT PRINTING ON DIGITAL DEVICES

Respondents that did not offer digital printing were asked: “What is the primary reason you do not print labels and/or packaging products on digital printing devices?” Package printers/converters offered the following reasons for not printing on digital devices:

- Doesn’t fit our product mix: 32%
- Outsource digital printing: 16%
- Colors printed don’t match well enough with our conventional presses: 11%
- Can’t competitively price digital in our customer markets: 11%
- Not productive enough for our work: 8%
- Digital devices can’t print white well enough: 5%
- Resolution or image quality is not high enough: 3%
- Customers request their jobs be produced on conventional presses: 3%



The top response, “Doesn’t fit our product mix,” likely reflects that many package printers/converters still rely on high volumes of long-run work.

An interesting takeaway from this finding is that the technology limitations of digital printing devices aren’t perceived as major obstacles to adoption. In addition, outsourcing digital printing remains a viable option for firms that are either not yet ready to invest or are unable to find equipment that fits their needs.

PRINTING EQUIPMENT OPERATED BY RESPONDENTS

Package printer/converter respondents operated a mix of digital and conventional printing technologies, indicating that both are essential to meet customer needs (Figure 2).

Equipment Used to Print Labels & Packaging

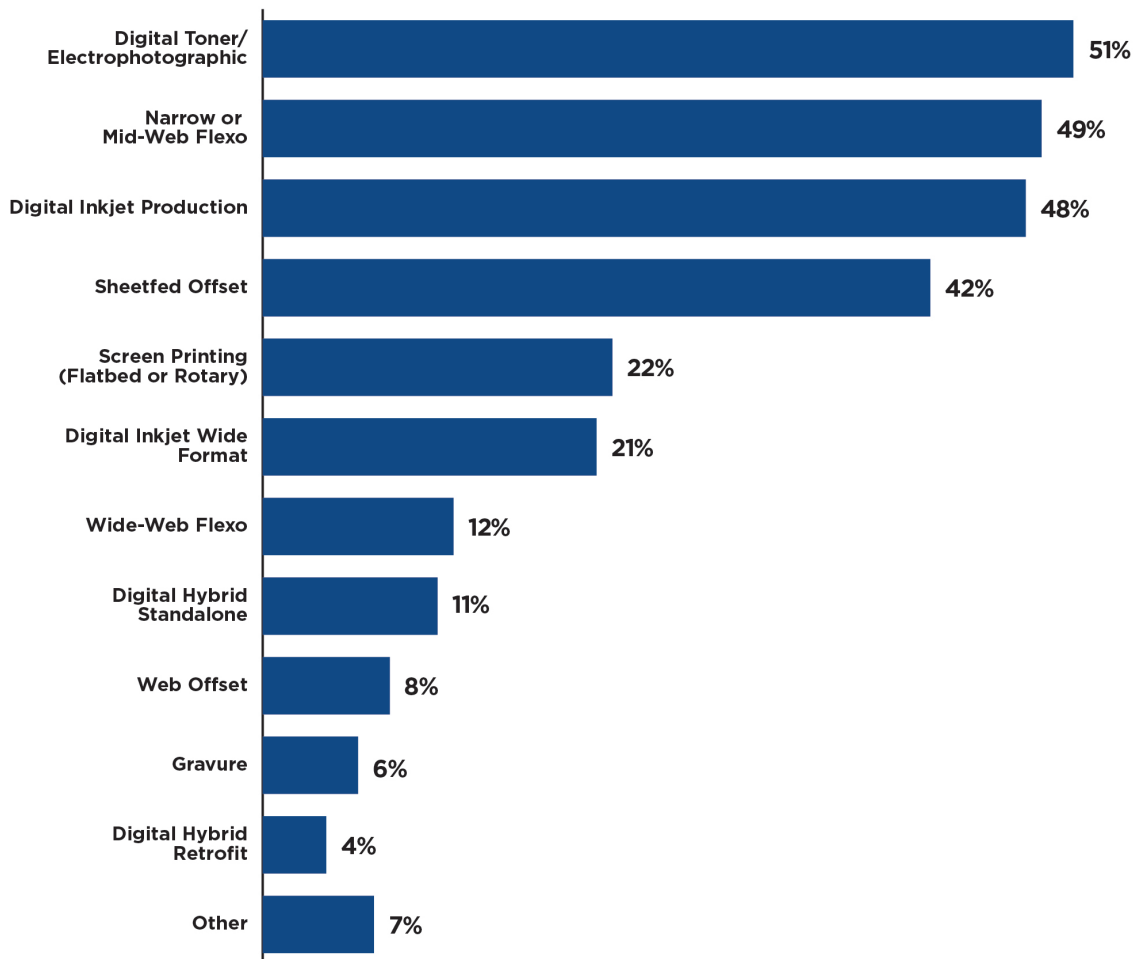


Figure 2
 Q: Which of the following types of equipment do you use in your operation to print labels and packaging?
 N=85 Package Printers/Converters that Print Labels and/or Packaging on Digital Printing Devices



A common debate among industry members is whether digital printing is a replacement technology for conventional printing or a complementary technology to be used in combination with conventional. The package printers/converters that participated in telephone interviews viewed the two technologies as complementary and noted that their technology investments were based on serving customers and improving operational efficiency.

While a key business challenge for many packaging printers is accommodating decreasing run lengths, interview respondents noted that having digital and conventional printing equipment in their operations is beneficial. They explained that they can economically accommodate customer demands for short-run work on digital equipment, while meeting longer-run requirements on conventional presses.

BRAND OWNERS

To qualify to take the survey, brand owners needed to work for companies that purchased packaging and be familiar with the printing processes used to produce their labels and packaging. More than three-quarters of respondents (76%) said they were very familiar with printing technologies used to create their packaging and labels. The majority of respondents were key marketing decision makers as 53% were executives (marketing executive or CEO), 12% brand/marketing managers and 13% product managers (Figure 3).

Brand Owner Respondents

Job Title

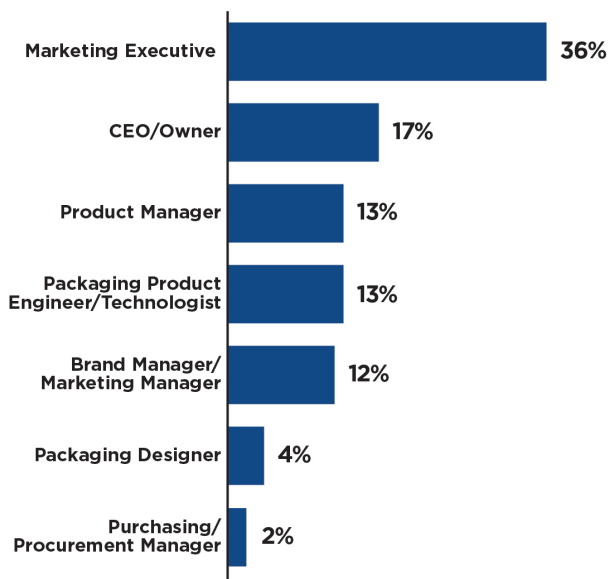
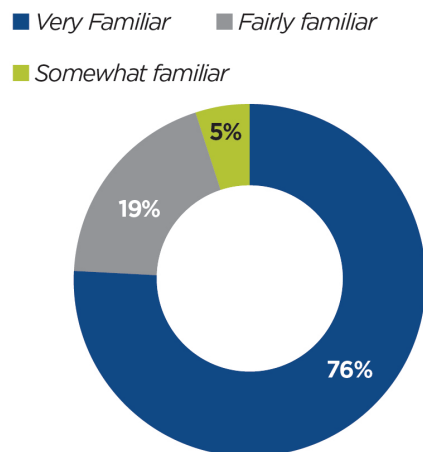


Figure 3A
Q: Which best describes your job role at your company?
N=266 Brand Owners

Familiarity with Printing Process



Respondents that indicated they were not familiar were terminated from the survey.

Figure 3B
Q: How familiar are you with the printing technologies used to create packaging or labels for your company?
N=266 Brand Owners

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Brand owner survey respondents included a mix of brand and private label goods producers across key industries that buy packaging (Figure 4).

Brand Owner Respondent Types

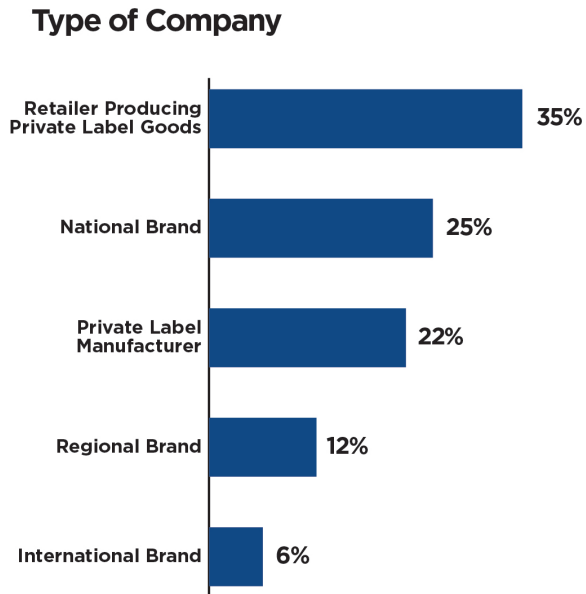


Figure 4A
Q: What type of company are you?
N=266 Brand Owners

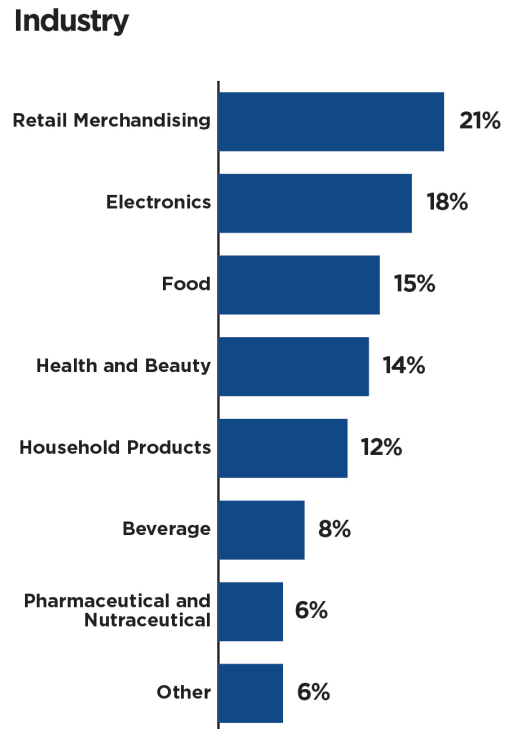


Figure 4B
Q: Which of the following best describes your company's primary market focus?
N=266 Brand Owners

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THE DIGITAL PACKAGING OPPORTUNITY

Packaging is a major influencer of consumer purchasing. It is a primary way of capturing attention, engaging consumers, and indicating the quality of a product. Packaging is an important part of any company's marketing strategy and in many respects is the fifth "P" of the marketing mix. Packaging is a significant vehicle for presenting marketing messages to consumers at the point of consideration, purchase and delivery.

Packaging is the New "P" in the Marketing Mix

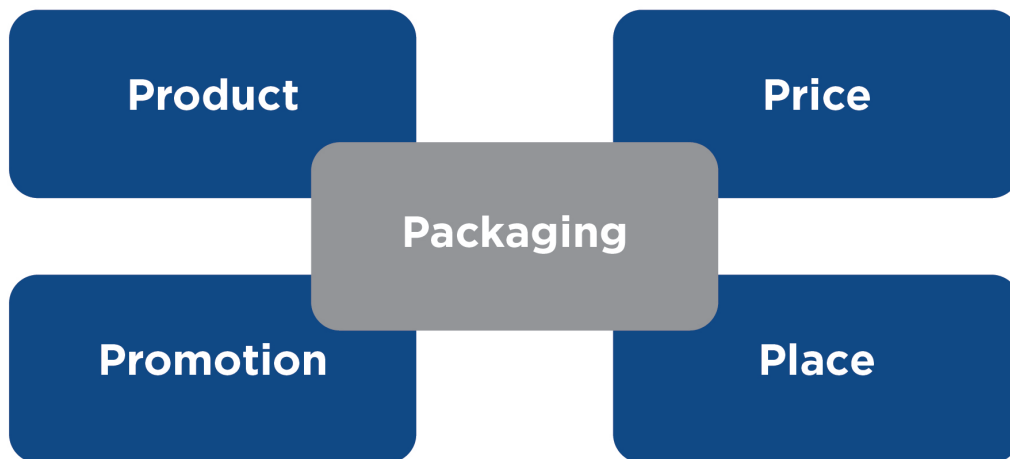


Figure 5

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A packaging printer interviewed for the study offered the following perspective on the power of the package. He said, "Brand marketers spend more than 40 hours a week thinking how to create a package that is going to sell their product and the consumer spends four seconds or less picking a product. What that means is that a package has to capture the heart and convince the mind in four seconds or less."

Given the importance of the package, brand owners and marketers are open to finding new methods and ways to improve results. Package printing stands to gain many important and transformational benefits from digital printing. The technology's ability to print affordable runs in shorter quantities, when needed, is enabling brand owners to more efficiently manage inventory and supply chains. At the same time, digital devices' ability to print multiple versions more affordably than conventional presses, and to output variable text and images, allows brand owners to respond rapidly to changing design, brand management, and regulatory requirements. The packaging market represents the next frontier for digital printing and brand owners.

Package printing stands to gain many important and transformational benefits from digital printing.



DIGITAL PRINTING SERVING BRAND OWNER NEEDS

Brand owners reported that packaging is a key marketing tool for their companies and that they prefer to work with printers/converters that offer digital printing (Figure 6). Packaging exerts a huge influence on a product's success.

Digital Packaging Powering Brand Owner Success

Packaging Key to Sales Success

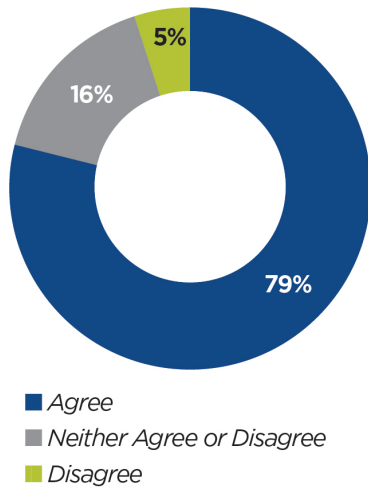


Figure 6A
Q: Please indicate your level of agreement with:
Packaging is a key marketing tool for our company
N=265 Brand Owners

Prefer Providers with Digital Printing

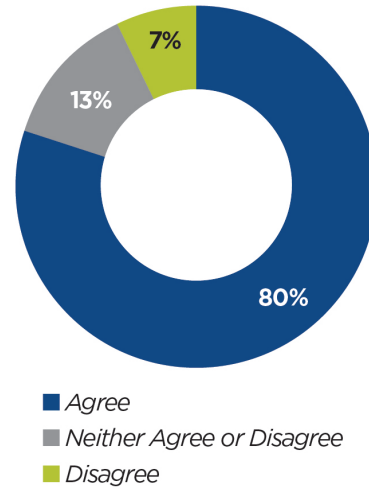


Figure 6B
Q: Please indicate your level of agreement with: We prefer to
work with printers/converters that offer digital printing
N=265 Brand Owners

NAPCO RESEARCH

A trip to a local store offers insight into actions brand owners are taking to improve and enhance the marketing power of their labels and packaging. Crowded retail shelves are lined with a wide variety of product versions and sizes. Companies are looking for innovative and engaging packaging options to enable their products to stand out from the competition.

New products are the lifeblood of nearly every company's growth strategy, not to mention a source of enormous investments in development, research and advertising. The success of a new product is often largely dependent on effective packaging. For established brands, many shoppers come to the shelf looking for a specific product. While the primary job of packaging is to contain, protect, and convey the product, another important role is to ensure recognition of a brand/product that people know and trust.

Putting the importance of packaging in perspective, a Harvard Business School study estimates that of more than 30,000 new consumer products that are launched each year, 80% of them fail. A likely reason so many products fail is that most consumers don't have the stamina to weigh the advantages and disadvantages of all the products they purchase, so they rely on the packaging. Packaging is a major influencer of a product's success. It is a primary way of capturing attention, engaging consumers and indicating the quality of a product.



Digital printing offers brand owners many options to help their products stand out on the shelf and to test various designs and concepts. This is because smaller quantities can be printed affordably on digital devices so brand owners can test options. Packaging printers interviewed reported customer demand for shorter runs to test packaging is increasing. As one packaging printer interviewed explained, “You could not really test packaging before digital printing because the costs to produce printing plates and other setup costs made it too expensive to print lower quantities on conventional packaging presses.”

Another packaging printer reported it is common today for customers to create two or three different designs of shorter runs to test in stores before deciding on what design will be produced for the full run.

Speaking to the power of testing designs on the actual retail shelf, a marketing director at a packaging printing company pointed out, “The most successful packaging is developed on the outside, not by a team of people sitting in an office. It is important to test the package outside the walls of a company. All successful companies have great products central to their success, but the package is the first thing the customer sees and touches.”

Brand owner respondents are looking to improve their packaging and gain operational benefits offered by short-run, on-demand printing (i.e. reducing product obsolescence, storage requirements and work-in-process costs) and are seeking out printers/converters that offer digital printing. This finding suggests brand owners understand the value and benefits of digital printing and are looking to leverage it to improve results.

BRAND OWNERS’ KEY PRIORITIES

Brand owner respondents reported key priorities aligned with the benefits of digital printing. Survey respondents identified developing compelling products, complying with regulations, customizing packaging, meeting environmental standards, adding security features and offering more personalization/customization as essential/high priority objectives (Figure 7). This finding points to the opportunity digital printing presents to brand owners in meeting objectives.

An important benefit digital printing offers brand owners is the ability to test packaging designs and concepts.



Brand Owners' Key Packaging Priorities

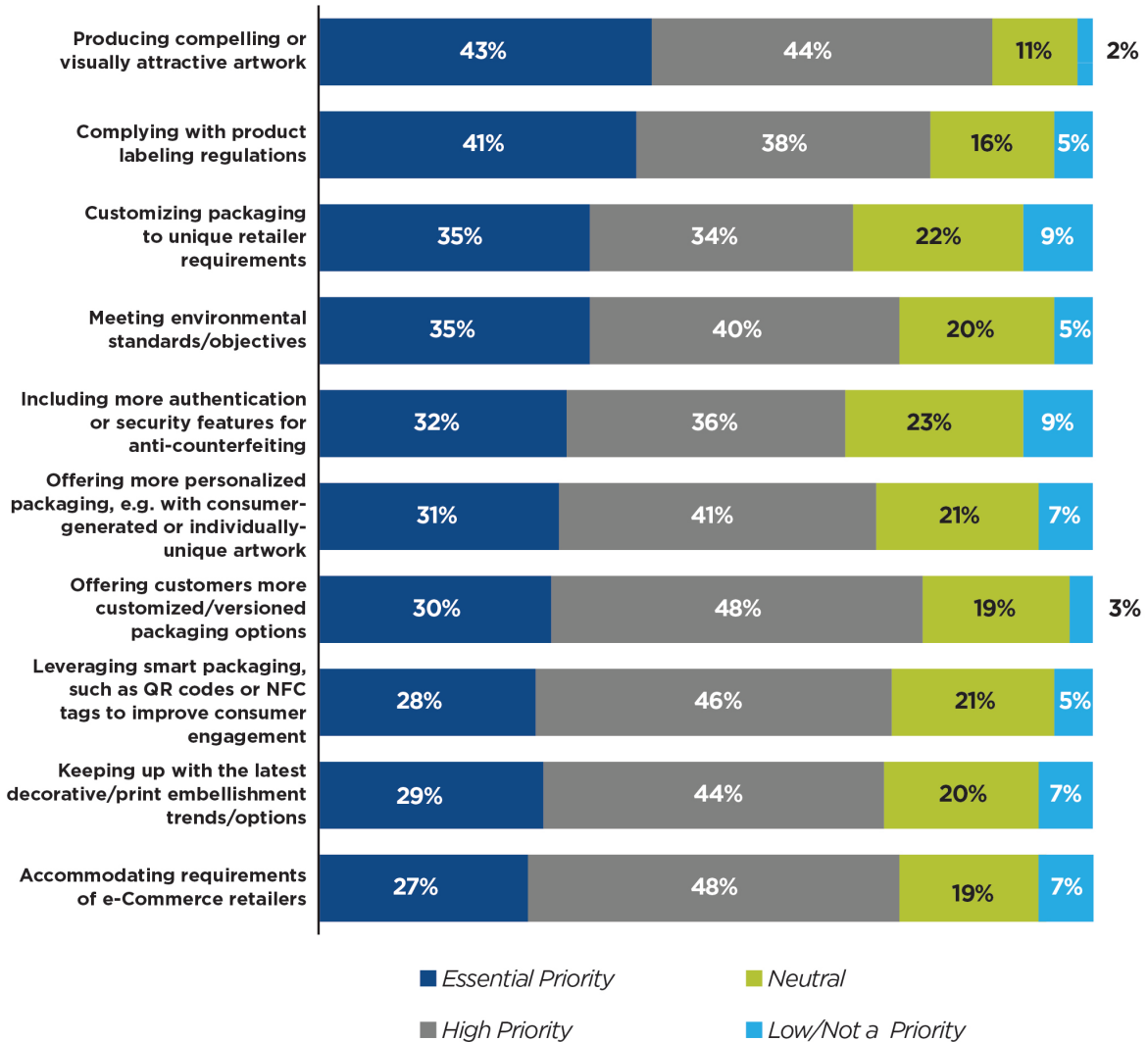


Figure 7
 Q: What is the level of priority for the following packaging-related objectives?
 N=265 Brand Owners

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Understanding brand owners' key priorities offers important insights for building sales and marketing strategies that yield results. Package printers and converters that incorporate brand owner priorities into marketing messages and sales conversations demonstrate that their organizations are knowledgeable providers of product packaging and labels.

According to a brand owner interviewed for this study, "We need quick turnaround, flexibility, and the ability to produce short-run work at reasonable prices."

Another interesting perspective provided by a producer of retail ready packaging (secondary packaging, often made of paperboard, that serves as both a shipping container and a way to display items on shelf), "Nothing kills a good product faster than bad packaging because if it doesn't look good on the shelf or you can't read the nutrition information, customers won't buy it."

Compelling or visually attractive work is important, the producer of retail ready packaging said, because in a retail environment, packaging must attract buyers and adhere to "25-, 10-, 2-foot rule." At 25 feet, vibrant colors and sharp graphics should be used so the product is a "beacon or lighthouse" for consumers. At 10 feet, the company's logo and tagline should be easily visible to ensure that shoppers will identify the brand. At two feet, when the consumer is almost in direct contact with the packaging, then the brand story and copy points need to be visible."

IDENTIFYING BRAND OWNERS' CHALLENGES

Digital printing offers many benefits to organizations that require packaging products. An important component of the research was to uncover the key packaging challenges brand owners encounter. Identifying brand owners' challenges offers key insights for packaging providers and suppliers to incorporate in their offerings. The survey asked brand owners to select their companies' top packaging challenges, and improving their supply chain, managing frequent product launches, designing influential packaging and managing versions topped the list. These key challenges focused on areas related to getting products to market and driving sales (Figure 8).

Understanding brand owners' key priorities offers important insights for building sales and marketing strategies that yield results.



Key Brand Owners' Challenges

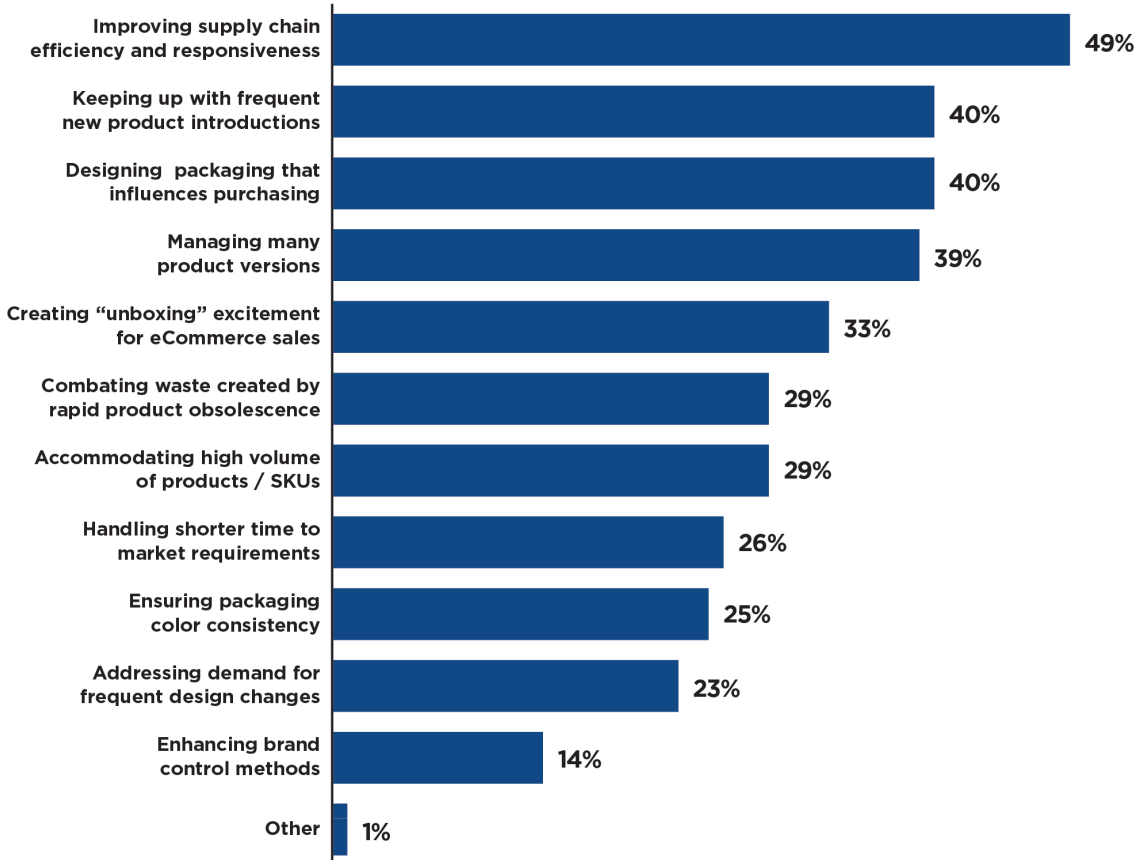


Figure 8
Q: What are your company's top packaging challenges?
N=265 Brand Owners



A key packaging challenge for close to half of brand owner respondents was improving supply chain efficiency and responsiveness. Commenting on the top challenge of improving supply chain efficiency and responsiveness, a brand owner said, "I don't need a product, I need a supply chain. How are your digital capabilities going to improve my supply chain and lower my total costs? I have inventory, obsolescence, material moves and overproduction. I want to know how are your digital capabilities and your supply chain model going to benefit me."

Digital printing offers the opportunity to address many brand owner challenges. On demand, short-run capabilities enable quick response to frequent product updates. Affordability of shorter run production combats the need to print and store, thus reducing obsolescence.

Another key challenge is creating packaging that influences purchasing. As one brand owner noted, "The only thing the retailer measures you on is your shelf velocity and cash register pass through. So your product at retail is either a profit leader or a place taker, and if it is a place taker it won't be on the shelf for long."



TURNAROUND AT THE SPEED OF NOW!

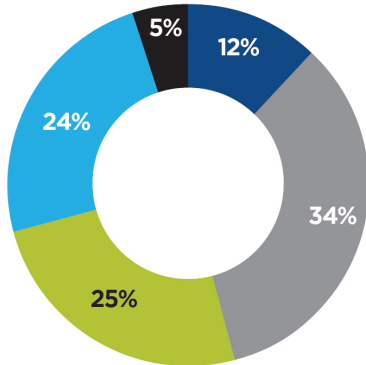
A key challenge for both brand owners and package printers/converters is producing work faster. Shorter production lead times for both printers and their customers is a key driver of investment in digital devices. Brand owners reported their typical turnaround time requirement for labels and packaging after file submission is six days, even shorter than the eight days package printer/converter respondents reported (Figure 9).

A packaging printer interviewed offered an interesting explanation of this timing discrepancy, “In business there are two clocks, the company clock and the customer clock. The customer clock is always a couple of days ahead of the company clock because speed to market equals speed to profit.”

Package Printing Turnaround Times

Package Printers/Converters

Mean: 8 Days

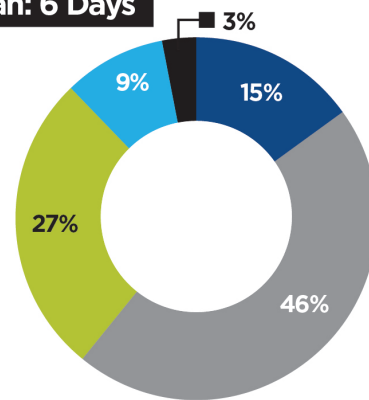


- Less than 2 days
- 2 to 5 days
- 6 to 9 days
- 10 to 20 days
- More than 20 days

Figure 9A
Q: What is your typical turnaround time for producing labels and packaging?
N=79 Package Printers/Converters that Print Labels and/or Packaging on Digital Printing Devices

Brand Owners

Mean: 6 Days



- Less than 2 days
- 2 to 5 days
- 6 to 9 days
- 10 to 20 days
- More than 20 days

Figure 9B
Q: What is your typical turnaround time requirement for labels and packaging after file submission to your package or label print provider?
N=265 Brand Owners

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This finding may also suggest that brand owners are subject to the ‘Amazon effect’ in which business moves at the speed of now, and that converters can expect even more pressure to speed up turnaround time. Digital printing reduces a number process steps and can accommodate brand owner requirements for faster turnaround.

BENEFITS TO PACKAGE PRINTERS/CONVERTERS

From a package printer/converter perspective, digital printing offers many attractive benefits. Converters and package printers participating in the survey reported that digital printing’s most valuable features are its ability to accommodate demand for shorter runs, eliminate plate and tooling costs, produce jobs faster, print multiple versions, provide personalization, produce short-run prototypes and enable rapid job changeovers (Figure 10).

Digital Printing Benefits

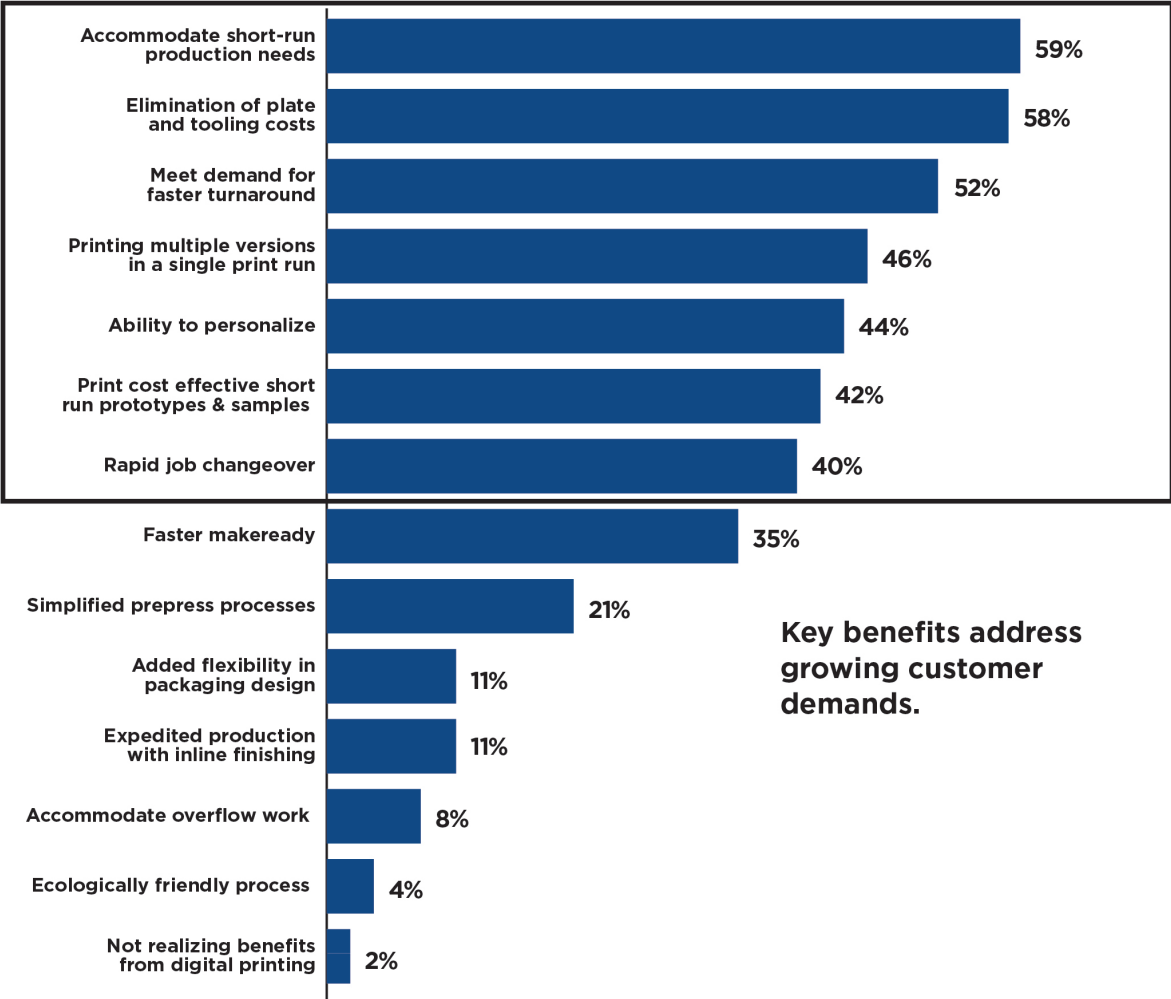


Figure 10
 Q: What are the most important benefits digital printing offers your package printing operation?
 N=85 Package Printers/Converters that Print Labels and/or Packaging on Digital Printing Devices



More than half of package printer/converter respondents report that demand for shorter turnarounds and shorter run lengths is growing. Most package printers/converters initially consider purchasing a digital press so they can satisfy the demand for short-run jobs. In response to an open-ended question, survey respondents said the top job characteristic that influenced the decision to print on digital devices was run length. Other considerations noted were versioning, cost, and turnaround time.

Packaging printers interviewed for the research offered the following perspectives on their investment in digital printing and its benefits:

- “With the increasing demand for shorter runs with shorter lead times, it became apparent we needed to move in the direction of digital to remain competitive.”
- “Digital offers quicker turnaround and the ability to do things we couldn’t in flexo. It also gave us the opportunity to do super high-quality labels on short-run work and allowed us to add prototyping.”
- “We sell digital directly and use it to augment our flexo capacity. We’ve offered short-run and variable-data label printing to our customers. We have upsold customers to its unique capabilities; we have one client that is printing customer selfies on its packaging. We also use it to print prototypes, where customers want to test packaging before investing in a full production run.”

TOP DIGITAL PRINT APPLICATIONS

Package printer respondents were asked what percentage of their packaging applications were printed on digital printing devices. Labels dominated digital applications as they were one of the first applications to migrate from conventional presses to digital devices (Figure 11). An interesting finding from this question is that other applications, such as folding cartons and flexible packaging are starting to move to digital printing devices. The migration of applications from conventional to digital is the result of ongoing innovation in technology and brand owners’ ongoing demands for better ways to attract customers and manage their supply chains.

Digital Capacity by Application

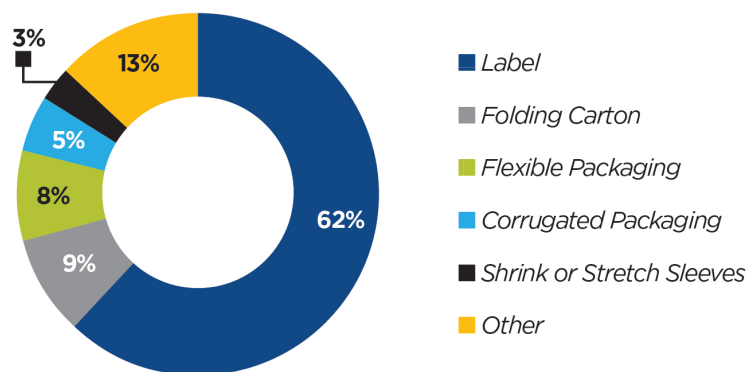


Figure 11
Q: How much of your digital print capacity is devoted to the following applications?
N=85 Package Printers/Converters that Print Labels and/or Packaging on Digital Printing Devices

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This finding suggests that digital printing is gaining traction across all packaging segments. It has its largest penetration in the label segment and is an emerging technology for use in printing folding cartons, flexible packaging and corrugated. Digital label printing has evolved to the point where there are an unprecedented quantity of options spanning EP, inkjet, hybrid and entry-level systems. As digital devices become more commonplace in package printing operations and sales people learn to better understand digital output and educate customers on how to make the most of it, applications printed digitally will grow.

An early adopter of digital printing interviewed for the study said, “We initially invested in digital to print labels. We needed to consistently deliver the quality requirements for a major customer and digital printing was known for providing excellent quality. That is what originally got us to invest, but then customers started to require lower order volumes and more SKUs to produce more regional brands. All of those requirements can be met with digital printing.”

Customer resistance was not a significant obstacle in printing on digital devices, suggesting that brand owners are beginning to understand — and even embrace — digital package printing.

BARRIERS TO PRINTING PACKAGING ON DIGITAL DEVICES

When asked to identify the top obstacles to printing packaging and labels on digital printing devices, half of package printer/converter respondents identified matching colors across digital and conventional platforms as a key obstacle (Figure 12). Selling digital printing and handling longer run lengths were hurdles for a quarter of respondents.

Interestingly, customer resistance was not a significant obstacle in printing on digital devices, suggesting that brand owners are beginning to understand — and even embrace — digital package printing. In addition, this points to brand owners beginning to design and specify packaging initiatives that line up squarely with the digital feature set.

Package printers/converters participating in in-depth interviews indicated that while matching colors was an initial obstacle, the use of color management practices, operator training and innovations in digital printing technology had lessened this difficulty.



Barriers to Moving Work to Digital Devices

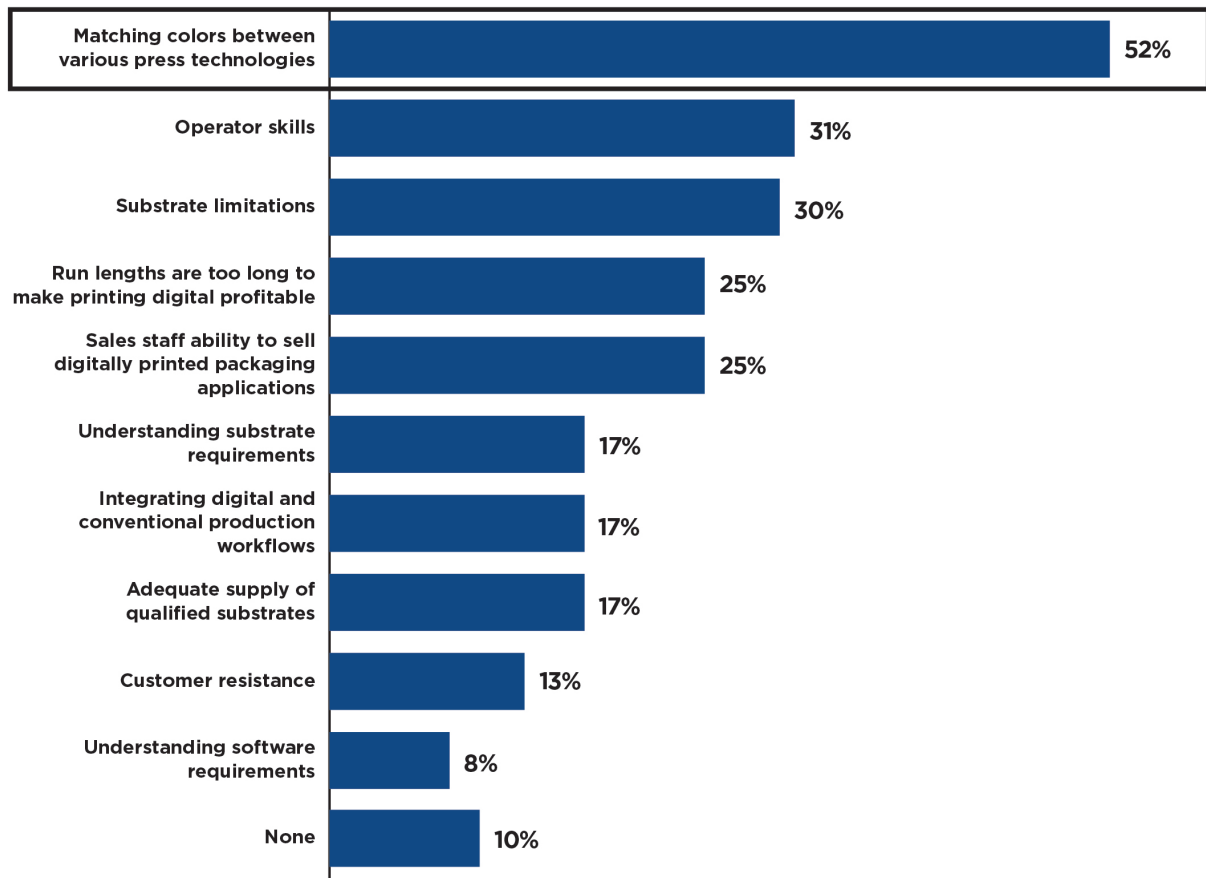


Figure 12

Q: What are the top obstacles, if any, your organization experienced in transitioning label and packaging work from conventional presses to digital printing devices?
 N=76 Package Printers/Converters that Print Labels and/or Packaging on Digital Printing Devices

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DEMAND FOR DIGITALLY PRINTED APPLICATIONS

Brand owner respondents indicate that demand for many types of packaging applications continues to grow. According to survey results, brand owner demands for key packaging applications are growing more than they are staying the same or declining. More than three-quarters of brand owner respondents that use prime labels reported growing demand for that application (Figure 13). Other important growth applications reported by brand owners include flexible packaging (68%), shrink sleeves (60%), corrugated displays (57%) and corrugated boxes (55%).

Growing Packaging Applications

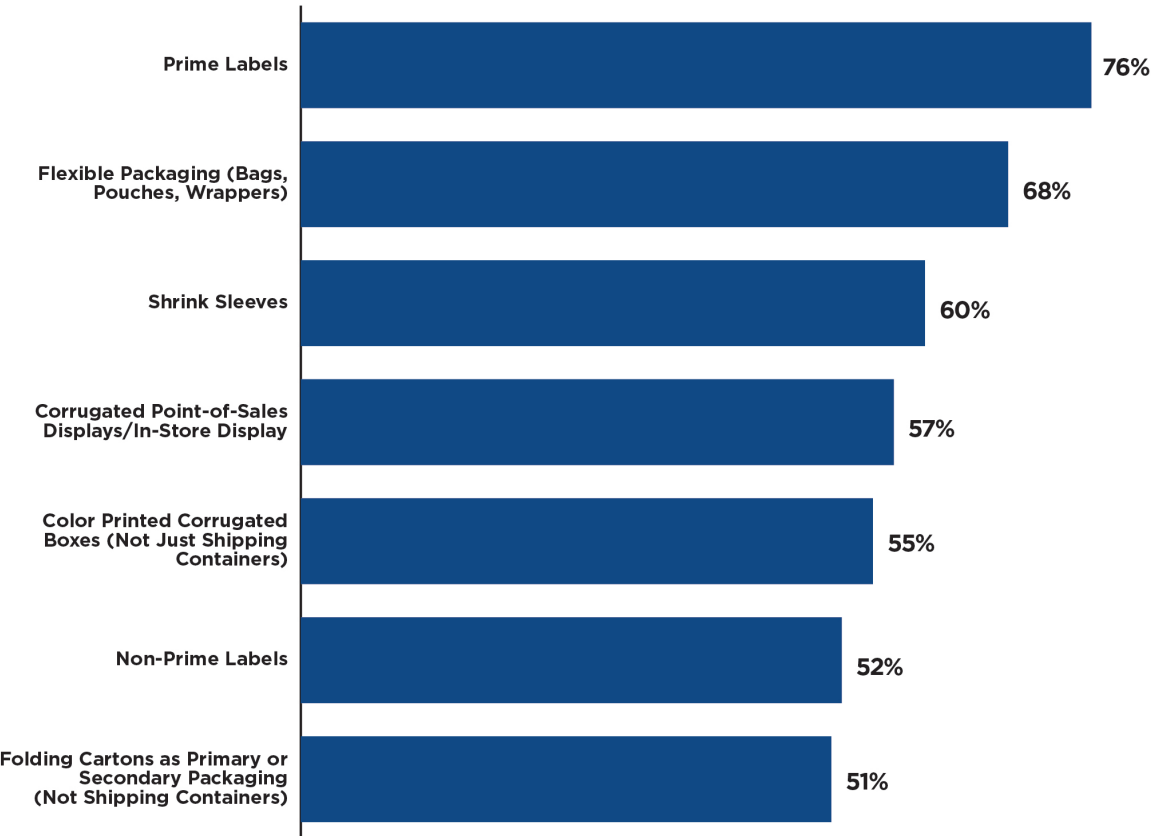


Figure 13
 Q: Please indicate if your use of the following types of packaging is growing.
 N=Varies based on packaging purchased, Base 266 Brand Owners



As packaging applications continue to grow, so too does the opportunity to print those applications on digital devices. Brand owner respondents report that many core packaging applications are printed on digital devices (Figure 14). Recall that survey respondents were required to be familiar with the printing technologies used to create their packaging or labels.

Applications Printed on Digital Devices

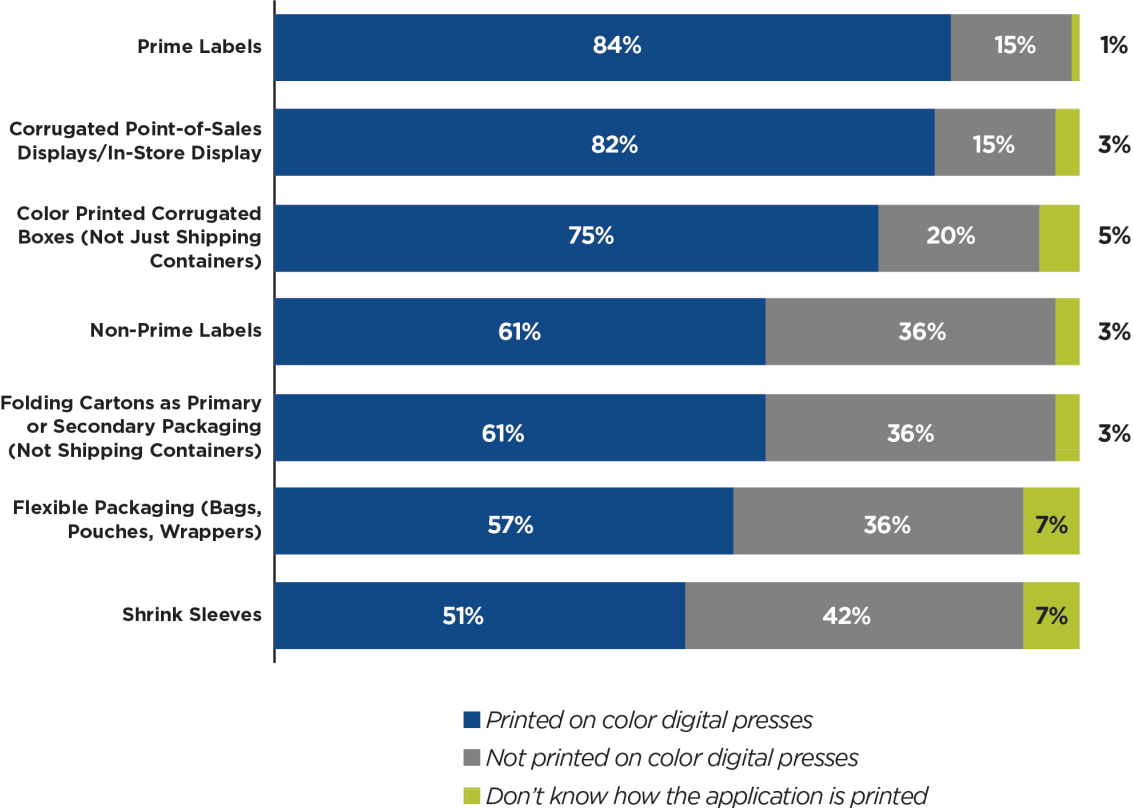


Figure 14
 Q: Of the applications you produce, which are printed on color digital presses?
 N=Varies, Base 266 Brand Owners



When it came to deciding the right printing process for their packaging work, nearly seven in 10 brand owner respondents said they most relied on their package printers/converters for guidance. A little more than half of brand owner respondents reported that they or their packaging team determined how a packaging job would be printed. Graphics (40%), marketing (33%) and advertising (24%) agencies also played a role, but secondary to packaging printers (Figure 15). This finding indicates a high level of trust between brand owners and their package printers/converters.

Printers Are Key in Process Decisions

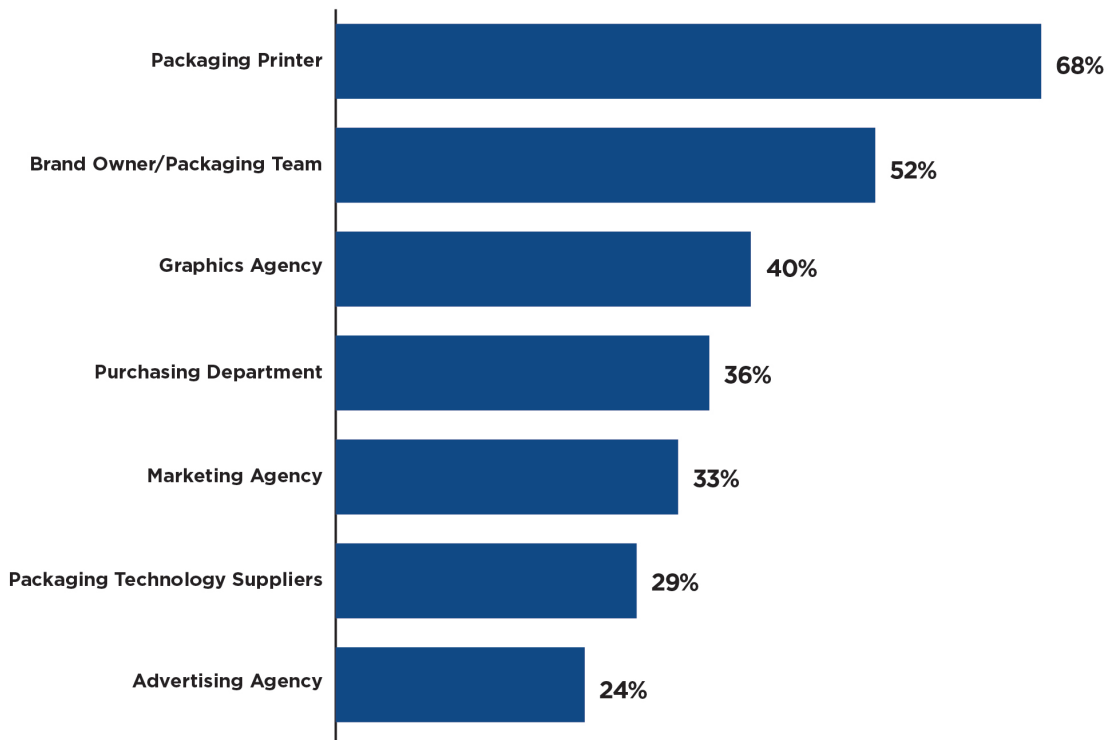


Figure 15

Q: Which of the following providers do you rely on the most to determine the right printing process for your packaging and labels?
N=266 Brand Owners

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THE POWER OF VERSIONING

The ability of digital printing to produce versioned packaging and labels more effectively than conventional printing is an attractive benefit to brand owners. Targeting consumers with more product versions is a critical factor driving demand of digital packaging production. Brand owners are exploring versioning for many competitive reasons: to capture customers' attention on crowded retail shelves, improve the customer experience with packaging and to engage with customers on a more personal level. Many product manufacturers focus on growing customer share through product extensions and ongoing product refreshes. This requires multiple versions of packaging, which digital devices can accommodate.

Brand owner respondents reported that customized or personalized packaging resulted in a positive effect on sales (Figure 16).

Versioning Has a Positive Effect on Sales

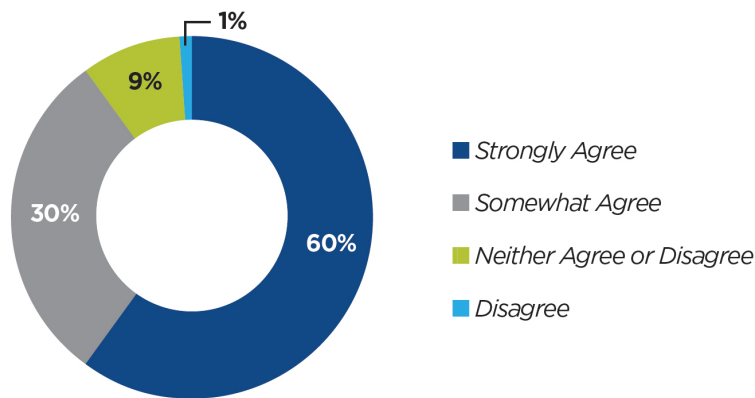


Figure 16
Q: Please indicate your level of agreement with: Customized or personalized packaging has a positive effect on our product sales
N=265 Brand Owners

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Marketers understand that producing unique printed products offers a variety of marketing opportunities, as well as the potential for improving brand image. The ability of digital printing devices to print variable images and text offers new opportunities for brand owners to consider. Items like wine and spirit labels can include hotel or restaurant names and images, or even be personalized for special occasions or very loyal customers. Health and beauty products can be branded to specific retail outlets or even particular locations. Product promotions can reflect seasons or major sporting events. Packaging that is versioned for specific geographic markets or even incorporates multi-lingual text is highly valuable to brand owners.

Another important factor fueling the increase in versioning is the increase in the number of product stock keeping units (SKUs).



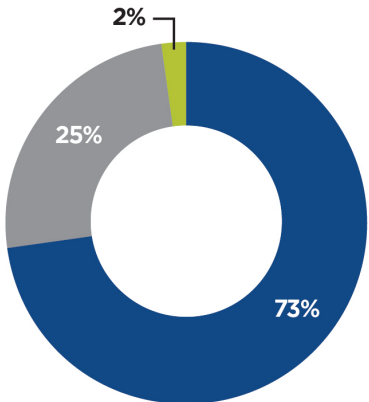
INCREASING NUMBER OF VERSIONS/SKUs

A major trend among companies producing consumer products is the continual growth in the number of SKUs. SKU denotes the identification code relating to an individual product or item available for sale. In consumer packaging, a SKU generally refers to different packaging versions of a product. For example, a tortilla chips snack with five different flavors would be considered as having five distinct SKUs.

Close to three-quarters of brand owner respondents (73%) report SKUs are growing. The average number of SKUs for respondents was 85,000 (Figure 17).

Brand Owner Stock Keeping Units

SKUs Growing



- Growing
- Staying the same
- Declining

Figure 17A
Q: Which of the following best describes the quantity of your packaging stock keeping units (SKUs)?
N=265 Brand Owners

Number of Active SKUs

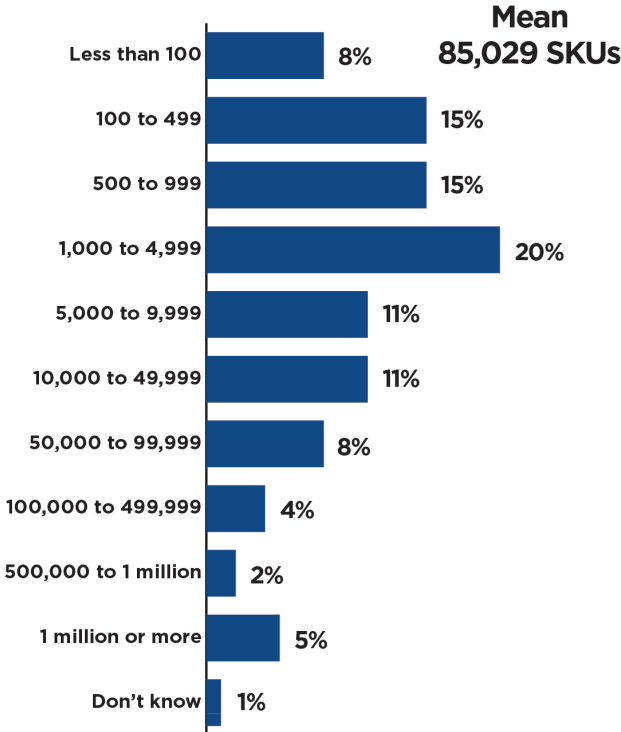


Figure 17B
Q: How many active packaging stock keeping units (SKUs) does your company currently market?
N=265 Brand Owners



Many factors can influence SKU quantities. The number of SKUs is growing as manufacturers are expanding their product offerings to accommodate shifting customer demographics, threats from competitors, different distribution channels (retail vs. wholesale vs. e-commerce) and retailers' demands for specific product versions for special and/or seasonal promotions. In addition, the shapes, forms and types of products are changing in response to macro trends, such as the increase in single-person households that require products in smaller size packages.

SKU INFLUENCERS

Respondents were provided with a list of SKU influencers to evaluate what factors yielded the most influence over the decision of how many SKUs to produce. Brand owners ranked options as follows:

- Keeping up with competitors: 50%
- Retailers want more package sizes: 44%
- E-commerce providers' demands to create excitement and control shipping costs: 35%
- Ability to produce packaging on demand: 33%
- Company mandated SKU rationalization processes: 30%
- Launching more product extensions or variations: 30%
- Pursuing private label business: 28%
- Increase in product testing: 27%
- Affordability of short-run packaging: 19%
- Shorter product development cycles and lifecycles: 14%

Some interesting takeaways from this question are that:

- Continuing growth of online shopping is shifting SKU requirements.
- While some companies are expanding the number of SKUs to accommodate product variation, others may be reducing them to cut costs and adhere to company rationalization processes.
- Cost/affordability was not a key influencer.

THE E-COMMERCE INFLUENCE ON PACKAGING

Delivering products and packages with personal appeal is even more important to e-commerce merchants. E-commerce marketers want to utilize every touchpoint to create a branded experience that sets them apart from competitors as well as one that creates a memorable experience for their customers.

Brand owners put a great deal of effort into enhancing the customer experience. Everything from the layouts of physical locations to interactions with staff to marketing materials to product packaging is carefully evaluated to influence customers. As more companies pursue selling through e-commerce, shipping has become a key part of the brand experience. This presents an opportunity for package printers and converters.



For example, Sutherland Packaging, Andover, NJ, recognized this opportunity and introduced a program to make packaging used by ecommerce shippers more vibrant. The company recently launched E-COMplete™, a product line that enables customers to cost-effectively create more colorful corrugated shipping boxes. The idea is to transform previously bland/plain containers into colorful valuable customer engagement tools.

Sutherland Packaging's Colorful Corrugated Shippers for E-commerce



Figure 18

Sutherland reports that its enhanced e-commerce shipping containers have proven particularly popular with retailers sending boxes of food, health & beauty aids and clothing to consumers on a regularly scheduled basis.

According to a press release issued by Sutherland Packaging, company president Tom Sutherland said, "By cost-effectively beautifying previously plain boxes, Sutherland Packaging's E-COMplete is an effective customer retention tool in the fast-growing online retail sector."

The press release also noted Sutherland's ability to provide ultra-customized hybrid solutions — for example, combining direct-to-corrugated with lithographic printing or conventional printing methods with digital — opens up a world of possibilities to e-commerce customers looking to spruce up their corrugated shippers.

DEMAND FOR PACKAGING ENHANCEMENTS

Brand owners rely on their providers to support their efforts to improve packaging engagement and security. Respondents were asked if they incorporate or plan to incorporate technologies that enhance the value of their packaging.

One area investigated in this question was interactive packaging. Brand owners are using packaging to enable customer engagement via mobile devices. More than half of respondents reported using QR codes and/or near-field communications (NFC) tags in their packaging, and another 29% planned to use both in the future (Figure 19).

While QR codes have been used for some time in packaging applications, NFC tags — which activate messaging on mobile devices — are gaining ground. NFC is often viewed as a more effective alternative to barcodes and QR codes. The tags are smaller, more discrete and can be integrated beneath labels and within packaging without affecting the brand identity. NFC technology also aids in prevention of counterfeiting and enables product authentication by a brand owner or customer.

Brand Owner Use of Smart Packaging

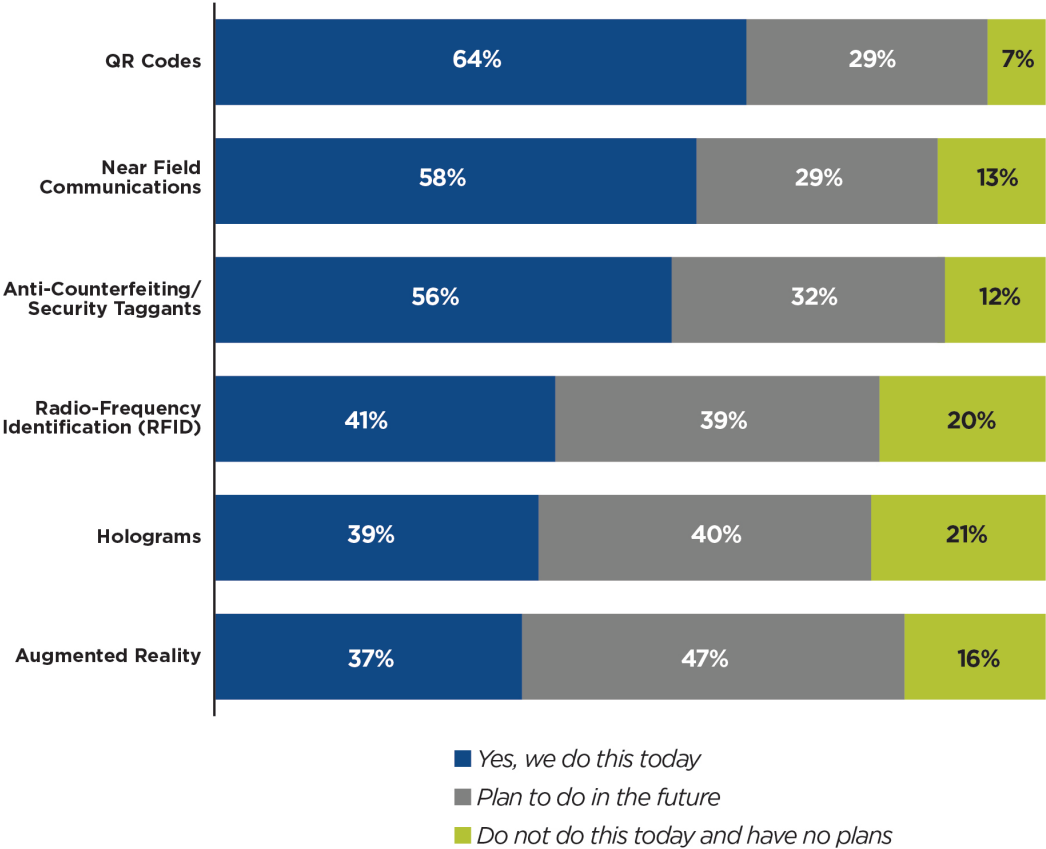


Figure 19
 Q: Does your company incorporate or plan to incorporate any of the following (technologies) into its packaging?
 N=265 Brand Owners

In addition, NFC offers direct engagement with consumers as NFC tags contain unique identifiers by item, not just product type, allowing retailers to connect with shoppers more directly. Brands can build customer loyalty by delivering exclusive content such as relevant cross-sell and upsell opportunities and discounts for regular purchases. In addition, content delivered via NFC can be different before and after purchase.

Brand owners are looking for “smart packaging” that can deliver an interactive experience as well as meet needs for security, anti-counterfeiting measures, quality assurance and compliance information. While this offers an opportunity for package printers/converters, many providers may be missing out on it. Package printer/converter respondents were asked what types of smart packaging they either offered or planned to offer. Most offered QR codes, but less than half offered other types of smart packaging enhancements (Figure 20).

Packaging Printer/Converter Offering of Smart Packaging

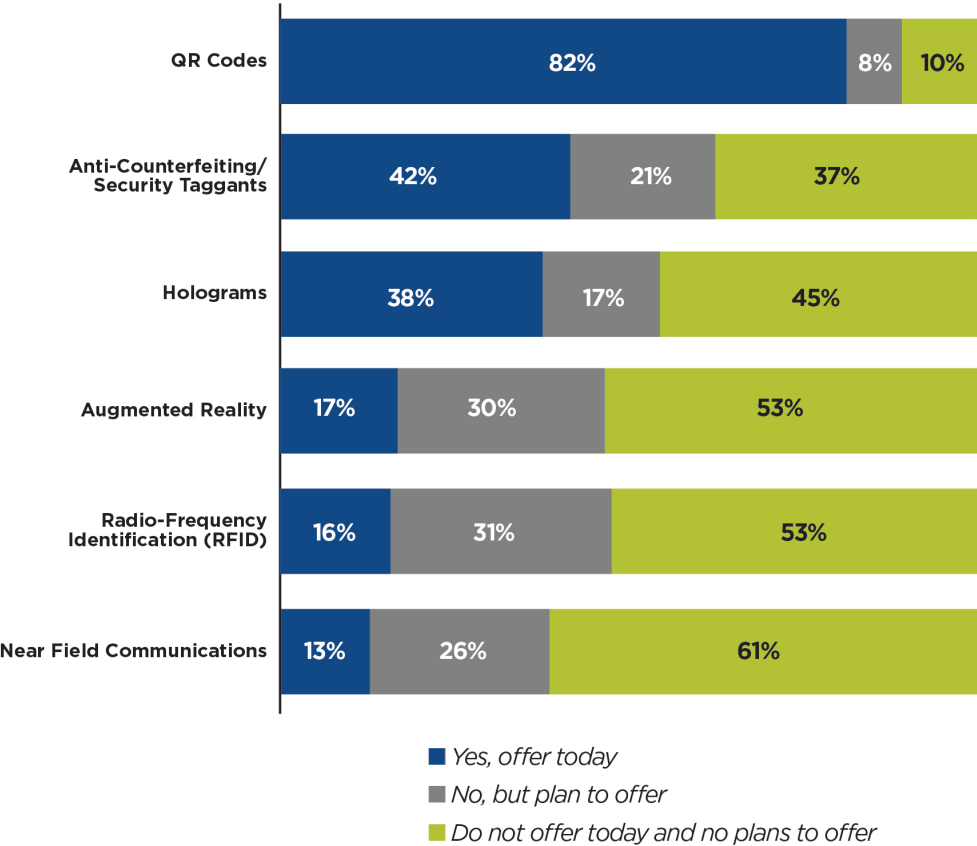


Figure 20
 Q: Do you offer customers the option to incorporate any of the following into their packaging or labels?
 N=76 Package Printers/Converters that Print Labels and/or Packaging on Digital Printing Devices



SELLING TO BRAND OWNERS

Brand owners have high expectations when it comes to choosing a packaging provider. Brand owners require providers to offer ideas to improve packaging’s aesthetic appeal to consumers, while also offering insights for improving environmental footprint, reducing costs, and improving efficiency. Figure 21 highlights the importance of attributes brand owner respondents expect.

Key Attributes of Providers

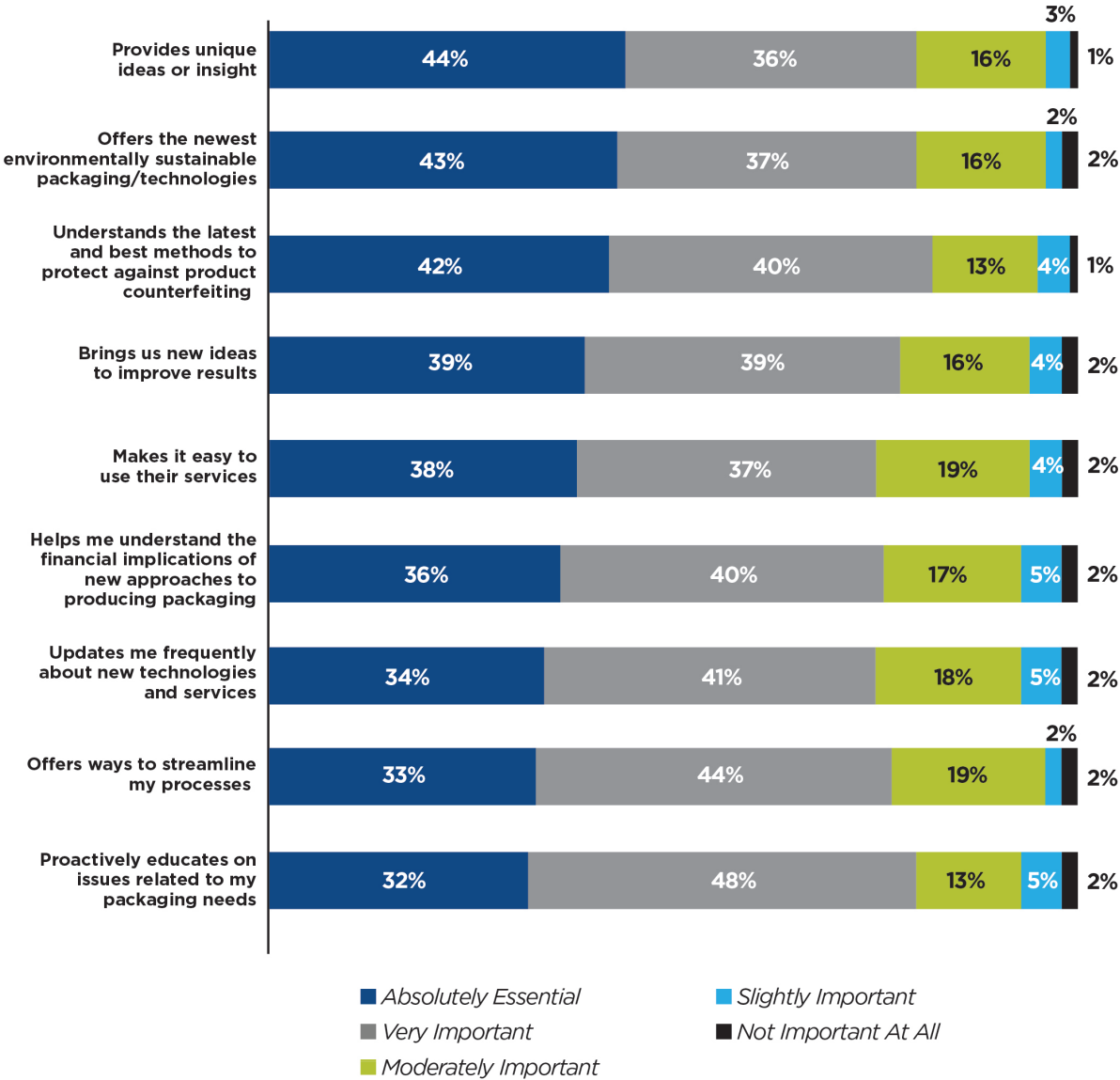


Figure 21
Q: How important are the following attributes when it comes to your package printing providers?
N = 256 Brand Owners



Package printers/converters offering digital printing understand its many benefits can be a strong partner in supporting the success of brand owner packaging and operational strategies. Providing ideas or insights that yield positive results was an essential priority for 44% of respondents. Brand owners also look for providers that use environmentally sustainable technologies. Digital printing devices eliminate the need to make printing plates and the reduce set-up/makeready waste associated with conventional printing. In addition, the ability to affordably produce lower quantities reduces packaging waste from obsolescence.

CRITERIA FOR SELECTING PROVIDERS

The survey also asked brand owners to rate the importance of criteria in selecting a package printer/ converter. Understanding these criteria can serve as a guide for selling to brand owners. The top five criteria brand owner respondents considered absolutely essential were price, quality, sustainability, meeting deadlines and understanding methods to thwart counterfeiting.

Brand owners often form strong partnerships with the packaging printers that are not easy for sales challengers to infiltrate. A key recommendation from brand owners interviewed on how printers can successfully sell them services is to find ways to demonstrate competence. Brand owners said:

- “Make us aware of what digital can do compared to other printing technologies. Teach us the advantages and the limitations.”
- “We’re looking for a partner that understands our challenges and can help us to overcome them and succeed.”
- “Help us launch our products based on our needs, not on filling your equipment capacity requirements.”
- “One of the most impressive packaging sales pitches we experienced was when a packaging supplier approached us at an industry event with a display mockup of our product. This type of preparation was both impressive and compelling enough to spur further conversation.”
- “Show a commitment to the kind of lean thinking that can help us reduce excess inventory; make better use of wasted space; and curb overproduction, unnecessary movement and over-processing.”
- “We expect our suppliers to support us when something goes wrong and share our sense of urgency about solving problems and meeting customer needs.”



Criteria for Selecting Providers

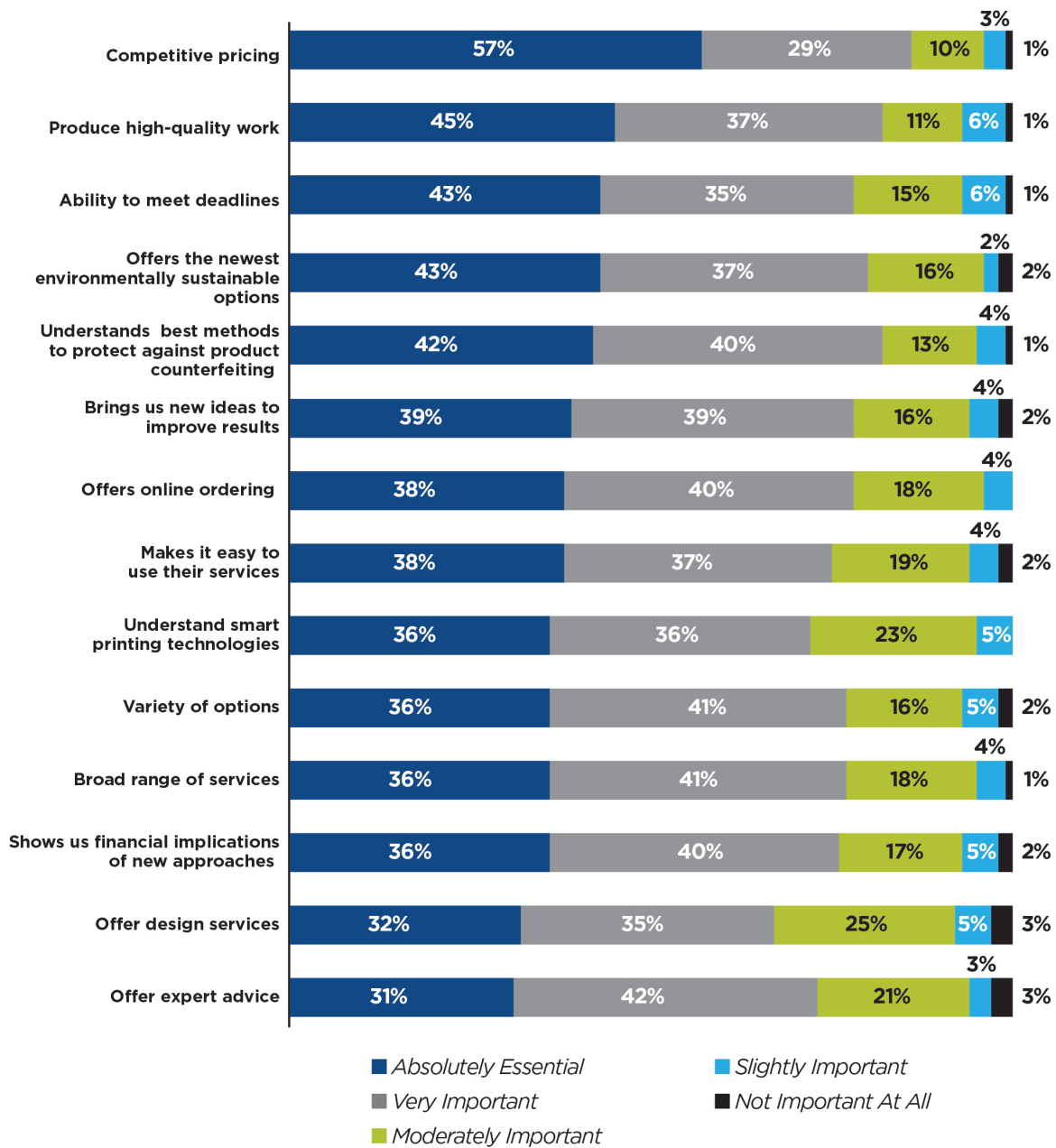


Figure 22
 Q: How important are each of the following criteria when choosing a packaging printer/converter?
 N = 256 Brand Owners

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CONCLUSIONS

Digital printing offers many benefits and opportunities for package printers, converters and commercial printers. Brand owners understand its value and are leveraging it to improve sales, better manage supply chains and reduce cost.

More and more, brand owners are turning to their package printers/converters for versioning, specialized short-run jobs with consecutive numbering, bar coding and variable text applications that cannot easily be done on any other press but a digital one. They also expect providers to understand their unique needs and suggest ways digital printing can improve their products' success and company's operational efficiency in managing packaging requirements.

The potential business impact of digital printing is becoming well understood among brand owners, and their demands for shorter runs, more versions, ability to test designs and faster turnaround show no signs of slowing. Brand owner respondents understand the benefits of digital printing and prefer to work with providers that offer it. Package printers/converters should not ignore the growth opportunity digital printing represents.

While digital print production is more common in the label segment, it is moving out to other applications. Package printers/converters are investing in digital devices to complement their conventional presses in meeting customer needs. Advances in digital printing technology have created great opportunities for package printers, converters and commercial printers to expand their packaging capabilities. No matter how you package it, the time for digital packaging is here.



WHO WE ARE



PRINTING United, a new event owned and operated by SGIA in partnership with NAPCO Media, will launch in Dallas, Texas, October 23–25, 2019. Focusing on the opportunities presented by the convergence of printing technologies and markets, PRINTING United will cover print and finishing technologies in industry segments from garment to graphic, packaging to commercial, and industrial. Its objective is to convey all components of integrated solutions to satisfy virtually any client need.

**For more information on PRINTING United,
visit www.printingunited.com**



WHO WE ARE



SGIA — Supporting the Leaders of the Digital & Screen Printing Community

Specialty Graphic Imaging Association (SGIA) is the trade association of choice for professionals in the industrial, graphic, garment, textile, electronics, packaging and commercial printing communities looking to grow their business into new market segments through the incorporation of the latest printing technologies. SGIA membership comprises these diverse segments, all of which are moving rapidly towards digital adoption. As long-time champions of digital technologies and techniques, SGIA is the community of peers you are looking for to help navigate the challenges of this process. Additionally, PRINTING United is the largest trade show for print technology in North America. “Whatever the medium, whatever the message, print is indispensable. Join the community — SGIA.”

For more information on SGIA, visit SGIA.org



WHO WE ARE



Led by a former Forrester Research analyst, the NAPCO Research team crafts custom data-centric solutions that leverage our highly engaged audiences across the markets in which we operate, our industry subject matter experts and in-house research expertise. We partner with our clients to identify their unique business problems and create solutions that enable deeply informed decision making.

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