



How Printing  
Technology  
Adoption is  
**IMPACTING  
PACKAGING'S  
FUTURE**

---

**packagePRINTING**  
powered by  **NAPCO RESEARCH**



## EXECUTIVE SUMMARY

The packaging sector of the printing industry is one of the most robust, with arguably the highest growth potential. The buying intentions of package printers reveal a great deal about the state of the industry. However, in concert with the rise of digital printing, conventional technologies like flexography and offset printing have experienced their own technological renaissance, building even further on the foundations these printing technologies have built for packaging.

To gain further insight into the technologies that today's package printers and converters are interested in investing in, *packagePRINTING* surveyed its audience of label, folding carton, flexible packaging and corrugated printers. The results revealed the printing technologies these companies have invested in over the past 18 months and the technologies they expect to invest in during the next 18 months. For further illumination on why these business leaders have made these decisions, we asked the survey participants to elaborate on the key drivers that are leading them toward investing in these technologies.

Given the fact that the package printing industry is typically considered to comprise four main segments — labels, folding cartons, flexible packaging and corrugated — each with its set of unique issues and challenges, this survey was designed to apply to all four packaging segments. When asked to identify the segment they most align with, the respondents provided the following results.

- Labels: **46%**
- Folding Cartons: **24%**
- Flexible Packaging: **22%**
- Corrugated: **8%**

Despite the disparity in the number of responses, our examination of the results showed the drivers for adopting printing technologies were largely similar among the four segments, indicating the packaging industry is viewing printing technology similarly across the board.

While our results confirmed our hypothesis that much of our audience would have its eye on digital technologies, they also revealed that package printers are still keen on investing in conventional equipment, lending credence to the theory that digital and conventional technologies will continue into the future as complements to each other.

Among our findings:

- Over the past 18 months, investments in digital and conventional technologies were largely equal, with toner, inkjet, flexographic and offset technology all seeing significant investment rates.
- Of those seeking to invest in digital printing in the next 18 months, the primary drivers are largely based around operational efficiency, although there is enthusiasm around the variable printing capabilities of digital technology.
- While, overall, fewer respondents expressed likelihood of investing in conventional technology in the next 18 months, the one third of total respondents that did reported it was primarily due to a need for increased capacity.

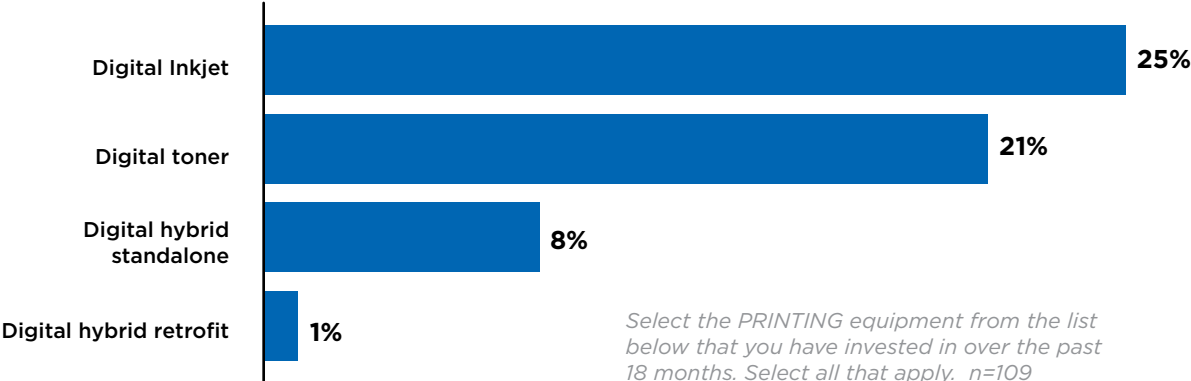
These results indicate the package printing industry is in the midst of a period where interest in capital equipment investment is high and both digital and conventional printing are in demand. With the recession of 2008 now a decade in the past, and a constant cycle of new, disruptive technologies hitting the market, it appears that printers and converters are seeking to strike while the iron is hot, so they do not get surpassed by their competition.

These results also indicate that equipment manufacturers are poised to enjoy returns on the investments they have put into research and development for their latest printing press models. That said, manufacturers of digital and conventional printing equipment would be wise to understand how their machines correlate with other technologies and market their products as complementary. As our results show, package printers are acting upon industry demands for both digital and conventional output.

## INDUSTRY INSIGHT FROM RECENT INVESTMENTS

Though digital printing has been utilized in packaging for more than two decades, it is only recently that the technology has become commonplace. Largely considered to be “The Packaging drupa,” or even “The Digital Packaging drupa,” drupa 2016 served as a launching pad for numerous digital package printing platforms that have now become indispensable tools in many package printers’ arsenals. Since that time, investment in digital printing has become a nearly necessary endeavor across multiple package printing segments. In fact, when asked to detail the printing technologies that they have invested in over the past year and a half, 55% of respondents indicated they have invested in some form of digital package printing technology. Specifically, 25% said they have made an inkjet technology purchase, while 21% said they have invested in toner-based technology. The remaining 9% stated they have invested in a hybrid solution that combines digital and conventional technology.

**FIGURE 1**  
**DIGITAL PRINTING EQUIPMENT INVESTMENTS OVER THE PAST 18 MONTHS**

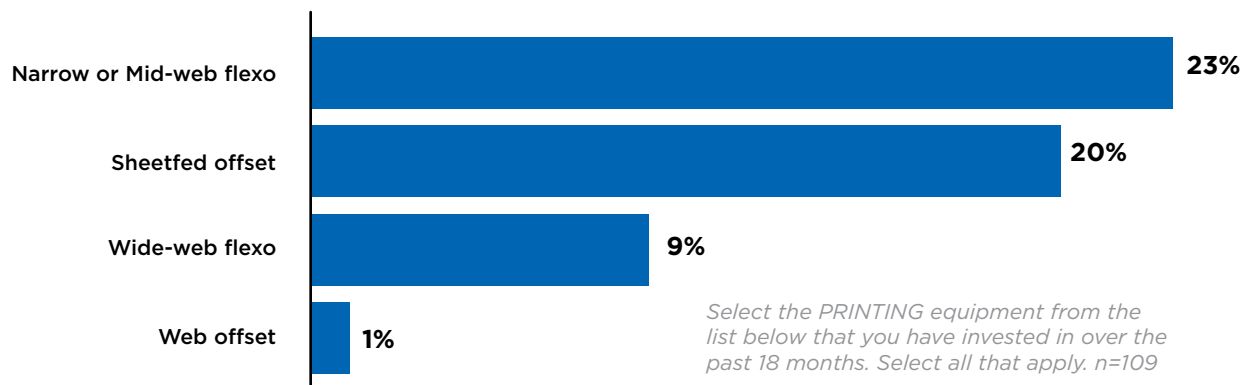


These results indicate that, over the past year and a half, the majority of the package printing industry has realized that digital printing is a viable technology for label and packaging manufacturing. Furthermore, they have seen enough of a need among customers to invest in the technology. What stands out about these results, however, is that investment in inkjet and toner-based devices is nearly even, demonstrating that there is no clear-cut preference among package printers as to their preferred digital printing technology.

At first glance, the fact that more than half of the respondents indicated they have made recent investments in digital technology, may provide the impression that digital is becoming the dominant technology in the package printing industry. However, assessing package printers' other capital equipment investments indicates otherwise. More than half (53%) of respondents said they have invested in conventional printing in the past 18 months, with narrow-web flexography and sheetfed offset leading the way at 23% and 20% respectively

FIGURE 2

## CONVENTIONAL PRINTING EQUIPMENT INVESTMENTS OVER THE PAST 18 MONTHS



It's a common debate among industry circles as to whether digital printing is best viewed as a replacement technology to conventional printing or as a complementary technology to be used in tandem with conventional. Package printers' even investment in digital and conventional printing over the past 18 months makes it clear the industry is viewing the two technologies as complementary, and printers are moving forward with plans to strategically pair the technologies.

However, not only are package printers utilizing digital printing in tandem with their existing conventional equipment, it appears they are seeing the benefits of upgrading their conventional printing, which has experienced its own technological renaissance in recent years.

## TECHNOLOGY IN TANDEM

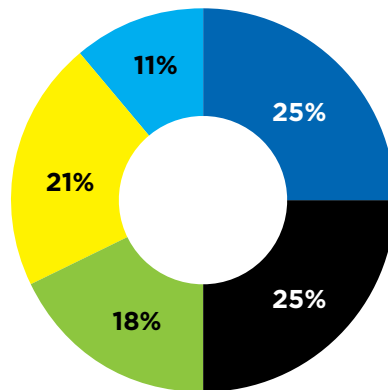
After gaining an understanding of the equipment package printers have invested in over the past year and a half, the survey sought insight into the type of printing equipment package printers expect they will invest in over the next 18 months, and the reasons why they are considering these investments.

Half of the survey respondents said they were likely to invest in digital printing equipment, 25% saying they were "very likely" and the other 25% indicating they were "somewhat likely" (figure 3). Meanwhile, 34% of respondents stated they were "likely" to invest in conventional, and 12% said they were "very likely" (figure 4). While it was not surprising to see more enthusiasm among package printers to invest in digital, the fact that more than one-third of respondents expressed that they are likely to invest in conventional printing (12% very likely, 22% somewhat likely), lends further evidence to the notion that the two technologies will be paired as complementary into the future.

When asked to indicate the key drivers toward their investments in both digital and conventional printing equipment, most respondents indicated their investments are largely centered on the equipment providing improved operations and efficiency. This further backs up the notion that when paired strategically in the same printing environment, having digital and conventional assets can be beneficial to streamlining operations, as short-run work is most economically produced on digital equipment, while long, production-style runs are better produced conventionally.

In fact, with 85% of respondents selecting it, digital printing's short-run printing capability is by far the top driver for package printers investing in the technology (figure 5). This result provides concrete evidence to the notion that while digital printing provides graphical capabilities that conventional presses cannot, the vast majority of package printers are investing in the technology as a way to solve an operations-related challenge.

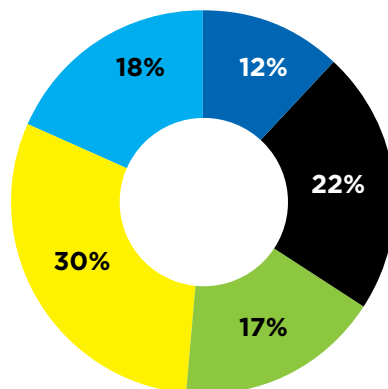
**FIGURE 3:**  
**PACKAGE PRINTERS' LIKELIHOOD OF INVESTING IN DIGITAL PRINTING TECHNOLOGY IN THE NEXT 18 MONTHS**



- Very Likely
- Somewhat Likely
- Neutral
- Not Very Likely
- Not at All Likely

*How likely are you to make an investment in DIGITAL printing equipment in the next 18 months? This includes standalone digital presses, hybrid presses and hybrid retrofits. n=109*

**FIGURE 4:**  
**PACKAGE PRINTERS' LIKELIHOOD OF INVESTING IN CONVENTIONAL PRINTING TECHNOLOGY IN THE NEXT 18 MONTHS**



- Very Likely
- Somewhat Likely
- Neutral
- Not Very Likely
- Not at All Likely

*How likely are you to make an investment in CONVENTIONAL printing equipment in the next 18 months. This includes flexographic, offset, gravure, screen or any other non-digital printing equipment. n=109*

FIGURE 5

## THE TOP THREE PRIMARY DRIVERS OF DIGITAL PRINTING INVESTMENT



*What are the primary drivers for your decision to invest in DIGITAL printing equipment? (Select all that apply) n=48*

In April 2018, *packagePRINTING* released a study on the top business challenges impacting the industry, and 51% of respondents indicated that decreasing run sizes were among their top three business challenges. These results indicate that package printers view digital printing as a solution to this challenge. When asked in this new survey to elaborate further on what is driving them toward digital printing, the respondents' comments provided an additional glimpse into the short-run challenge:

"Being a narrow-web house, we find more and more short-run work coming in our door," one respondent wrote. "Digital may be a solution to speeding up the short-run process if we can make it profitable."

Another respondent indicated that it is not just inefficient to print short runs on conventional equipment; it can be wasteful: "Short run orders would be redirected to the digital printer, eliminating low-production, high-waste jobs from my conventional presses."

Meanwhile, on the conventional side, the top investment driver is yet another indication that these two technologies will be viable printing options moving forward. Of the 34% of respondents that said they are likely to invest in a conventional printing solution in the next 18 months, 59% stated increasing production capacity was among their key drivers.

FIGURE 6

## THE TOP THREE PRIMARY DRIVERS OF CONVENTIONAL PRINTING INVESTMENT



*What are the primary drivers for your decision to invest in CONVENTIONAL printing equipment? (Select all that apply) n=32*



What this indicates is that package printers are successfully growing their businesses and customer bases, and are in need of new equipment to handle this work. With the technological improvements and increased speeds of modern flexographic and offset presses, it seems that many package printers are seeing the need to upgrade their conventional technology to better handle their daily output.

Though short runs are on the rise, the notion that package printers, many of whom have built their businesses on being able to quickly and cost-effectively produce long runs of packaging, are in need of new equipment to increase their capacity, indicates that short runs have not completely taken over the industry. In fact, when asked to elaborate on why they are investing in conventional equipment, multiple respondents indicated their businesses are growing and conventional printing is needed to handle the influx of work.

“[Our] current assets are fully utilized, and additional capacity will be needed to take on new business,” one respondent said.

In addition to the increased capacity, respondents indicated that technological advancements in conventional printing have enticed them to invest.

“[Keeping] up on the new technology as well as to maintain capacity for new and upcoming products,” another respondent said regarding conventional equipment investment.

## VARIABLE PACKAGING ON THE WAY

The No. 1 reason for digital printing investment is largely based on operational efficiency, but the unique graphic capabilities digital offers should not be overlooked. The No. 2 driver for digital printing investment is its variable, personalized or customizable printing capabilities, with 69% of respondents selecting this option.

Personalization is far more challenging in packaging than in the commercial printing segment, where it's easier to know exactly who will be the recipient of a printed product. In most cases, it is almost impossible to know exactly who will be the purchaser of a printed package, so brands have had to use creative tactics to implement personalization as a means to connect with consumers. Some successful endeavors include the printing of names on beverage labels and digitally printing consumer submitted photos onto a package.

Additionally, as brands expand their product lines and the proliferation of SKUs continues, the trend of versioned packaging will remain a key driver of digital printing investment. Though a different strategy than personalized packaging, versioned packaging has become another way for brands to develop a more personal connection with consumers. For example, snack food brands that expand their flavor options often keep their packaging largely the same, save for a few tweaks in the colors, text and graphics. Because these versioned runs are produced in lower quantities than standard production runs, digital printing can often serve as a preferable method to produce this packaging.

Overall, based on the results, digital printing's ability to make package printers respond more nimbly to customer demands is a strong driver for investment.

“We need to be able to print whatever the customer wants and currently have more limited capabilities,” said one respondent.

## CONCLUSIONS:

The packaging industry is in a constant state of evolution as new technologies emerge and brands seek out new ways to connect with consumers. Package printers and converters must continually ensure they understand how these trends impact their businesses and how their technological capabilities can serve these needs. The results of this survey demonstrate that printers and converters across the packaging spectrum are eager to invest in the latest technology and understand that both digital and conventional printing investments are important to maintain the versatility needed to serve their customers.

The observations that can be gleaned from this survey demonstrate some clear action items for both converters and suppliers in the package printing industry. For converters that have not made investments into their printing technology, it would be wise to make an assessment of their current assets and at least explore making technological upgrades. As the results of this survey show, their competitors are doing exactly that, and those not investing in printing technology run the risk of being left behind. Suppliers, meanwhile, can take solace in the fact that they have a customer base eager to spend money on equipment. However, with more converters seeking to invest in digital technology, it would be wise for conventional printing suppliers to enter the digital space — either through a partnership with a digital vendor or by internal development. Additionally, the survey demonstrates that converters are viewing digital and conventional presses as complementary technologies, and suppliers of either technology should be prepared to position their equipment as a strong partner to the other.

Going forward, the industry should be aware of the following trends as they relate to package printing equipment investment:

### **Digital Printing as a Solution for Operational Efficiency**

- While package printers and converters are increasingly intrigued by digital printing's ability to produce variable, personalized and customized packaging, the No. 1 driver toward investment in digital printing is its ability to efficiently and cost-effectively produce short runs of packaging (85%). There's no doubt that the variable or personalized capabilities digital printing provides can be great creative assets for brands, but package printers should consider digital presses as tools to optimize their workflows, especially when considering that in our prior research, 51% of respondents stated decreasing run sizes was among their top-three business challenges. Meanwhile, digital press suppliers should understand that this is a top concern of their customer base and need to position their products to be the short-run solution.

### **Conventional Presses are Here to Stay and Will be Paired with Digital Assets**

- Ever since digital printing proved itself to be a viable method for printing packaging and labels, much of the conversation surrounding the technology has been about whether it will be a replacement for conventional printing. The results of this study indicate that package printers are still highly enthusiastic about conventional printing and are even seeking out new conventional assets that carry the increased speeds, capabilities and automation their predecessors did not. Package printers should be aware competitors are broadening their technological horizons and optimizing their facilities to use both technologies to the best of their abilities. Suppliers, meanwhile, should not be placing all of their resources in keeping up with digital, as there is a clear need for enhanced conventional presses to tackle production-length print runs.



## Package Printers are Expanding their Horizons

- In an industry where convergence is occurring at a rapid pace, and printing companies of all stripes are exploring ways to add to their offerings, package printers are demonstrating a desire to use technology to expand beyond their traditional capabilities and markets. Although it is not the No. 1 driver of digital printing adoption, the variable, customizable and personalization capabilities digital provides is a key attribute, with 69% of respondents indicating it is a key acquisition driver. Meanwhile, on the conventional side, 28% of respondents stated they're investing in conventional to enter new market segments, while 22% said they're investing with a desire to add new products. Package printers should always be thinking about how they can grow their businesses, beyond just doing more of the same. Clearly, the industry is looking toward the latest in technology to be the bridge to new offerings.

Technology in the package printing industry is constantly evolving, and package printers are always looking for ways to gain a competitive advantage. Understanding how those in the industry view the roles new technology can play in their business can help package printers and suppliers thrive on the cutting edge.

## METHODOLOGY

This online survey was conducted over a two-week period in the second quarter of 2018. A total of 109 respondents completed the survey. Those respondents comprised a portion of the packagePRINTING audience, including printers and converters of labels, folding cartons, flexible packaging and corrugated. All survey responses were captured anonymously.

---

# WHO WE ARE

---

## packagePRINTING

*packagePRINTING* provides authoritative coverage on the industry trends, emerging technologies and latest news for printers and converters of packaging. Our goal is to connect our readership with cutting-edge solutions and provide stories of success that will drive the future goals of their organizations. Our magazine, website, e-newsletter, video and multi-media content offer a one-stop shop for information and insight into all packaging segments and the printing technologies that drive them.

## NAPCORESEARCH

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 problem and create solutions that enable deeply informed decision making.

Contact [research@napco.com](mailto:research@napco.com) for a research consultation.

## 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, the SGIA Expo 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](http://SGIA.org)

