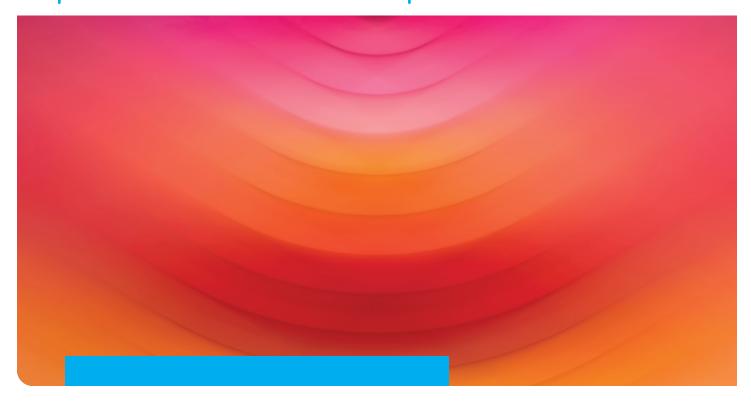


**Production Digital Printing 2023:**Navigating the Year Ahead







# **Production Digital Printing 2023:**

# Navigating the Year Ahead

Operational success and profitability in the coming year will require print service providers to invest in tools, staff, equipment, and methods to enhance productivity, overcome supply chain disruptions, address labor shortages, and meet challenging customer demands.

This special report identifies the top trends influencing the printing industry's competitive landscape, recommendations for overcoming challenges, key application opportunities to pursue, and the role production digital printing can play in achieving success in 2023.

# 1. MINIMIZING THE IMPACTS OF LABOR SHORTAGES

All industries across the United States are experiencing labor challenges. A recent NAPCO Research survey of commercial printers found that 69% identified hiring production staff<sup>1</sup> as a critical/moderate challenge.

To address the labor challenge, organizations are focusing on methods to entice workers and are making investments in technology to automate processes. Here are actions to consider for addressing labor shortages in the coming year:

Statistics estimates that the average person will have 12 jobs<sup>2</sup> in his or her lifetime. If the average working career is 40 years, that equates to people changing jobs every 3.33 years. This estimate puts the labor challenge

## **Top Trends 2022**

- 1. Minimizing the Impacts Of Labor Shortages
- **2.** Automation Is an Essential Tool for Achieving Profitability
- **3.** The Supply Chain: The Paper Chase Where Are We Now?
- **4.** Production Inkjet Growth Continues
- **5.** Digital Printing's Next Chapter in Book Printing
- **6.** Commercial Printers Expanding Services and Digital Print Use
- 7. Direct Mail Gets Smarter and More Effective
- **8.** Transactional Documents: More Personal, Colorful, And Interactive
- **9.** In-Plants Making Moves to Better Serve Parent Organizations

in perspective and emphasizes the need for print service providers to offer competitive benefits, wages, and programs to retain staff. Employee retention efforts that often yield results include mentoring, employee development, bonuses, and recognition.

**Expand recruiting practices:** Staffing agencies, professional recruiters, and online search engines are common avenues for finding job candidates. Successful printers are expanding recruiting practices to include academic institutions (high schools, technical schools, community colleges, and universities) to access a diverse talent pool and internship programs.





- Create or strengthen employee referral programs: A first step many organizations take in the hiring process is asking existing employees if they know someone good for the role. An employee referral is often a less expensive and faster way to hire and generally produces a better hire.
- Invest in automation: Many jobs once only possible by human contact can now be automated with workflow solutions, digital presses<sup>3</sup>, and integrated finishing lines. In most instances, print service providers can combine workflow software with digital print solutions to help increase productivity and efficiency and reduce dependency on labor skills and staffing. For example, digital presses are easier to operate than offset presses, lessen the need for highly skilled operators, and require fewer operators (one operator can run multiple presses.)

# 2. AUTOMATION IS AN ESSENTIAL TOOL FOR ACHIEVING PROFITABILITY

Automation is a critical component in optimizing technology investments, increasing page volume, and reducing costs — all factors that lead to profitability. Automation can be as simple as a system that manages basic prepress functions such as preflighting and uploading files to the server or as intricate as a cloud-based platform that automates the entire workflow.

Over three-quarters of commercial printer (79%) and in-plant (85%) survey respondents participating in a NAPCO Research survey report retooling operations to increase automation and productivity<sup>4</sup>.

Core benefits of automation include:

- Removing production bottlenecks that obstruct job volume throughput, hamper productivity, and strain profits.
- Reducing human touch points in print manufacturing so that jobs move faster through the production process. In addition, every time a worker physically touches a print job, it opens up the possibility of an error, which can result in extra costs to fix mistakes.
- **Lowering staff requirements.** With the current labor shortages impacting printers' abilities to attract and hire staff, transitioning human-driven processes to automation reduces the number of employees needed.

#### **Automation Tools Deliver Results**

Automation supports strategies to reduce waste, use less labor, and improve profit margins. Print service providers that have invested in workflow and tools like Canon's PRISMA workflow solutions are experiencing substantial business and operations benefits, including:

- The ability to meet tighter deadlines
- Better printing device utilization
- Fewer manual interventions, reducing errors and unnecessary downtime
- Smart job batching to improve job efficiency and profitability





- Centralized reporting
- Enhancing customer experiences through improved communications and reliability

The effects of automation are far-reaching in any printing operation, as it can speed throughput, reduce labor costs, and improve accuracy. The benefits of investing in the right digital equipment and workflow are important for printers of all sizes. In 2023, workflow automation will offer print providers a competitive edge in becoming a high-value, low-cost, high-margin producer.

#### 3. THE SUPPLY CHAIN: THE PAPER CHASE — WHERE ARE WE NOW?

Supply chain challenges continue to cause painful disruptions for the printing industry but appear to be improving. According to PRINTING United Alliance's 2022-2023 State of the Industry survey, 61% of print providers identified material shortages as their biggest challenge, down from 95% a year ago.

Paper is at the top of the list of raw materials affected by supply chain disruptions. Lead times continue to be long, and printers and their customers are often forced to use alternate papers to complete work.

The more than 200 print service providers participating in the PRINTING United Alliance's *State* of the *Industry Survey* are reporting some movement off bottom regarding paper availability and pricing. Table 1 shows the most recent survey findings compared to previous findings.

### Table 1: Paper Availability Increasing

How do the availability and prices of the substrates you purchase compare with 60 days ago?

	More Available than 60 Days Ago		Prices Higher than 60 Days Ago	
Substrate	September	April	September	April
Uncoated paper	22.6%	2.7%	86.7%	94.7%
Coated paper	17.1%	2.0%	89.8%	96.0%
Newsprint	7.0%	1.7%	52.9%	69.6%

Sources: 2022-23 State of the Industry Survey, n=244, and State of the Industry Update, 2nd Quarter 2022, n=270



The survey also captured the following actions print providers are taking to lessen the effects of paper shortages:

- Building inventory
- Keeping clients informed and being transparent on availability
- Encouraging clients to plan jobs far in advance
- Exploring substrate and production alternatives
- Frequently adjusting prices and increasing markups
- Meeting regularly with suppliers to discuss future material requirements and alternatives, price expectations, and current and expected supply chain conditions





- Holding regular internal meetings with purchasing, estimating, scheduling, production, sales, and customer service to discuss material availability, pricing, substitution options, and client feedback
- Partnering with members of trade associations, peer groups, and local printers to share supply chain intelligence, storage space, and supplies
- Elevating inventory management to mission-critical function
- Recognizing that superior supply chain management is a competitive advantage

#### 4. PRODUCTION INKJET GROWTH CONTINUES

According to research firm Mordor Intelligence, the global value of production inkjet printing was \$86.29 billion in 2021 and will reach \$138.81 billion in 2027. The market is expected to register a compound annual growth rate (CAGR) of 8.32% during 2022-2027. This includes applications like books/publications, commercial print, advertising, transactional print, labels, and packaging.

Keypoint Intelligence's (KPI) 2019-2026 Market Size Print Volume Forecast expects A4 offset pages in the U.S. to decline by a CAGR of -3% to 1.37 trillion in 2026. Over the same period, digitally printed A4 pages are expected to increase by a CAGR of 3% to reach 75 billion. Not all offset-printed pages are expected to transition to digital printing.

In addition, KPI's *U.S. On Demand Printing & Publishing Forecast: 2021-2026* reports that overall, electrophotographic (EP) printed applications will decline, while inkjet will increase. Specifically, KPI expects that between 2019 and 2026, the CAGR for electrophotographic print volume will decline by 5%, while inkjet will increase by 8%. In addition, the research firm expects inkjet will have an advantage in capturing offset print volumes that are shifting to digital printing.

This migration of both offset and toner to production inkjet is driven by inkjet's ability to produce high volumes of variable content at a lower cost without sacrificing print quality.

Offset is still the technology of choice for producing longer-run work, but more jobs are migrating to inkjet presses due to declining production costs, increasing substrate availability, growing customer demand for personalization, and a dramatic improvement in quality.

Toner work is also migrating to inkjet because of the availability of sheetfed inkjet presses that offer lower consumable cost, better uptime, higher quality, and wider substrate options when compared to toner. In addition, production inkjet has lower per-page costs than toner technology.

According to a NAPCO Research survey<sup>5</sup>, over half of commercial printer respondents (61%) and over one-third (39%) of in-plant respondents expect to add high-speed production inkjet.

The high percentage of commercial printers planning to invest in inkjet is reflective of the technological advancements that have made it such an attractive and versatile technology. For example, while the first high-speed production inkjet presses were roll-fed systems, the introduction of sheetfed inkjet presses is expanding opportunity for print service providers by offering affordable, high-quality color printing, attractive running costs, smaller footprints, substrate flexibility, and enhanced productivity.



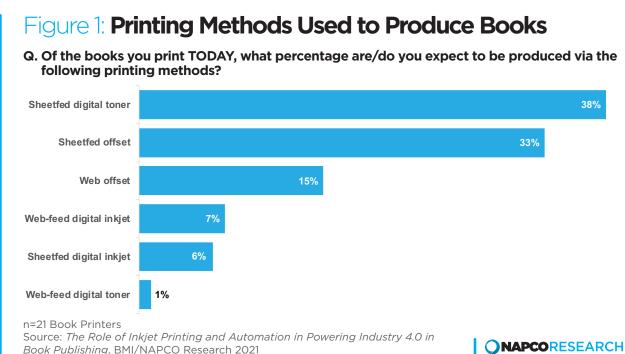


#### 5. DIGITAL PRINTING'S NEXT CHAPTER IN BOOK PRINTING

Navigating today's competitive publishing environment calls for book printers to develop and pursue strategic initiatives that create highly agile organizations capable of rapidly responding and adapting to change, better meeting publishers' dynamic needs, and accelerating business growth. Recordbreaking book sales over the last two years are softening, while at the same time, print providers continue to face paper and labor shortages.

Sales for printed books are strong but declining. The most recent data from Association of American Publishers (AAP)<sup>6</sup> finds that total revenues across trade (consumer books), higher education course materials, and professional publishing in midyear 2022 were down 4.1% year-to-date, coming in at \$6.6 billion for the first seven months of the year.

Digital printing offers flexibility in meeting ever-shifting customer demand. Printers participating in a NAPCO Research survey reported 52% of their books are printed on digital presses<sup>7</sup> (Figure 1). When asked about the key factors in choosing to print books digitally or offset, 95% of respondents indicated run length was an important reason.



Book printers were early adaptors of digital printing and production inkjet. Much of the early growth in production inkjet volume was in the printing of monochrome book blocks. The next phase for digital book production is sheetfed inkjet presses that can affordably produce high-quality monochrome and color work on a variety of substrates.

Books are a print application that continues to demonstrate value, relevance, and resilience. Digital printing technology continues to transform book manufacturing by offering print providers and publishers new options to improve efficiency and profitability. While book printers have been producing books on digital presses for some time, innovations in technology are moving more work from offset to digital, improving productivity, and offering new opportunities for products and services.



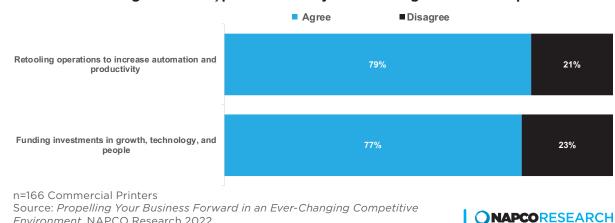


# 6. COMMERCIAL PRINTERS EXPANDING SERVICES AND DIGITAL PRINT USE

Commercial printers are navigating a challenging competitive environment as increasing material and labor costs are squeezing profitability, while customers still expect high-quality products and services at competitive prices. Despite challenges, commercial printers are retooling operations and making investments to support growth (Figure 2). The high number of commercial printer respondents planning to fund investments in growth, technology, and people points to a recognition that staying competitive requires ongoing attention, action, and a willingness to invest in operations.

## Figure 2: Commercial Printers Investing in Operational **Improvement**

Q. For the following statements, please indicate your level of agreement. Our operation is...



#### **Investing in High-Speed Inkjet**

Environment, NAPCO Research 2022

Competitive market challenges have commercial printers pursuing strategies to be more profitable, expand product offerings, compete on service, and strengthen customer relationships. Commercial printers are making investments to automate, upgrade, enhance services, and grow.

A key investment area for commercial printers is production inkjet. Over half of commercial printers (61%) responding to a NAPCO Research survey report adding high-speed production inkjet<sup>8</sup>.

Commercial printers' investment in production inkjet will continue as it offers the following benefits:

- Extends the crossover point for digital print versus offset, enabling more pages to migrate to digital print
- Allows more variable data options to personalize printed materials
- Prints high-quality graphics, as some presses can print in 1,200 dpi resolution
- Supports a wide range of substrates
- Produces high-volume or short-run jobs (made possible by the speed, productivity, reliability, low running costs, and high levels of automation of today's presses)



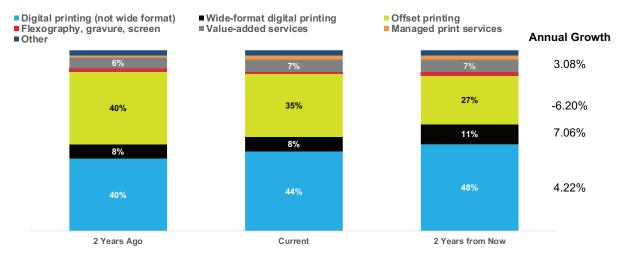


#### The Offset to Digital Migration Continues

Commercial print work will also continue to migrate from offset to digital presses. Figure 3 shows the past, present, and expected future distribution of services of commercial printers participating in a NAPCO Research survey. In the next two years, respondents expect wide-format digital printing, value-added services, and digital printing to represent the largest share of their workloads.

## Figure 3: Share of Work Produced by Commercial Printers

Q. What percentage of your organization's work falls/fell/will fall into the following types of services?



n= 184 Commercial Printers Source: *Propelling Your Business Forward in an Ever-Changing Competitive Environment*, NAPCO Research 2022







#### **Print and Digital Media**

In addition, the research surveyed communication buyers and influencers on the effectiveness of print and digital media. A majority of respondents report both are extremely/very effective. The high marks respondents gave both print and digital media support the strength in combining the two. Print and digital media complement each other. Adding QR codes, personalized URLs, and augmented reality markers to print enables it to be connected to digital content. Using print to connect customers' mobile devices to view videos, order products, and access additional content leverages the strengths of multiple media.

A finding from a previous NAPCO Research/Canon research effort titled *Print in the Eye of the Buyer* indicated that print is frequently combined with digital media (Figure 4).

#### Figure 4: Print Use in Multi-Channel Communications Q. Which of the following customer communication outreach/campaigns do you support with multi-channel communications that include print? Ongoing communications with existing clients 45% New customer on-boarding 44% Welcome kits 44% **Customer loyalty programs** New customer acquisition 43% **Enrollment programs** 40% 33% Lead nurturing campaigns None of the above Multiple responses permitted n=230 Communication Buyers and Influencers **NAPCORESEARCH** Source: Print in the Eye of the Buyer, NAPCO Research 2020





#### 7. DIRECT MAIL GETS SMARTER AND MORE EFFECTIVE

Direct mail continues to be a hallmark of many organizations' marketing campaigns. According to SG360°'s survey of consumers<sup>9</sup>, 72% report they "feel positive about receiving direct mail."

According to a 2022 NAPCO Research survey of communication buyers and influencers<sup>10</sup>, 49% reported that use of direct mail increased in the last 12 months, and 43% expected further increases over the next two years.

Sophisticated technologies are enhancing direct mail's value and its results. These tools are enhancing direct mail's effectiveness because they enable delivery tracking, collect valuable lead data, and generate ROI metrics. Print service providers offering direct mail need to evaluate current offerings and consider expanding services. Here is a summary of tools and services that can enhance direct mail results:

- Intelligent mail barcodes: Direct mail that includes this barcode allows print providers and the United States Postal Service to sort, track, and deliver each direct mail piece with accuracy and speed. This unique barcode also enables the sender to better estimate a mail piece's delivery window crucial information for coordinating the supporting elements of multi-channel, multi-touch integrated marketing campaigns.
- Quick response codes: QR codes eliminate the gap between customer response and delivery of coupons, product information, special offers, or other marketing follow-up communications. These two-dimensional, square barcodes can store large amounts of unique data, and when scanned, launch specific actions. QR codes not only allow consumers to immediately access coupons, landing pages, product information, and other data directly from their mobile devices, they also enable marketers to collect data on consumer activity and track the effectiveness of marketing elements in real time.
- Mobile SMS text marketing: SMS text marketing is designed to motivate an immediate response, collect real-time consumer data, and facilitate two-way communication by incorporating SMS marketing elements on direct mail pieces. Consumers are using mobile text marketing to initiate a survey, provide feedback, access customer service and support, receive promotional offers, or redeem customer loyalty rewards. Marketers benefit through real-time response metrics in addition to capturing mobile phone numbers and other information to enhance consumer data sets.
- Extreme personalization: Nothing captures attention and motivates response like relevant and timely personalized communication that provides a unique experience for each consumer. Print service providers are offering solutions to leverage database integration, variable data printing, marketing triggers, and integrated multi-channel marketing to help marketers tell their story, motivate response, and boost revenue.
- Linking printed direct mail and digital media: The use of QR codes during the COVID-19 pandemic educated the masses on how print can connect to digital media and was a key factor in a resurgence of omni-channel integration. As direct marketers look for ways to enhance customer experiences and engagement, innovative print service providers are guiding them in combining direct mail with digital media.





#### **Direct Mail and the Metaverse**

Direct mail may also play a role in building the Metaverse. Many marketers are considering the Metaverse<sup>11</sup>, an interactive digital reality, as the "next big thing." With direct mail, marketers can leverage a common, tangible, and effective channel to connect people to the Metaverse, which will be unfamiliar and perhaps intimidating to newcomers.

Personalized and relevant direct mail can be used to attract new customers or retarget a client's digital customers (those that have abandoned online shopping carts and forms or unsubscribed from marketing email) to the Metaverse.

# 8. TRANSACTIONAL DOCUMENTS: MORE PERSONAL, COLORFUL, AND INTERACTIVE

Transactional documents/statements, policies, contracts, and invoices have historically not been considered eye-catching applications. However, today's buyers expect high levels of color and personalization, along with high-quality, on-time delivery, and effective calls to action.

Broadridge commissioned a study titled "Engaging Customers in a Digital World," in which 3,025 U.S. and Canadian residents aged 18 and older were surveyed. One of the critical findings was that personalization was essential to customer engagement. The study indicated that 63% of consumers are more likely to engage and respond to personalized messaging. In addition, 74% of consumers want providers to customize their experience based on what the company knows about them.

A noticeable trend in transactional documents is their evolution as marketing vehicles, mainly the result of production digital printing. Full-color, high-speed variable digital printers produce custom print communications for nearly the same price as black-and-white. In addition, production inkjet technology has made color communications affordable and endlessly customizable.

From an operations and customer service perspective, billing statements, collection letters, welcome kits, appointment confirmations, and payment reminders can benefit from color because it:

- Brings attention to specific content elements in a document
- Directs readers through the flow of the document
- Adds emphasis to key messaging
- Provokes customers to respond to a call to action, such as making a purchase or paying a bill
- Improves the readability and customer experience

Another important finding from the Broadridge study is the value of omni-channel communications in customer engagement. According to the survey, 56% of consumers are interested in companies using QR codes on printed communications as a way of improving the communications they send. Providing a seamless experience across print and digital channels by including a method (like a QR code) to link printed statements to interactive digital experiences can make it easier for customers to pay, purchase, enroll, or take a desired action.





Organizations that are enhancing the look, role, and functionality of transactional communications are reaping benefits, including better response, faster payments, increases in upselling, or higher action rates. This presents an opportunity for print service providers to offer colorful, highly personalized, and interactive transactional communications.

#### IN-PLANTS MAKING MOVES TO BETTER SERVE PARENT ORGANIZATIONS

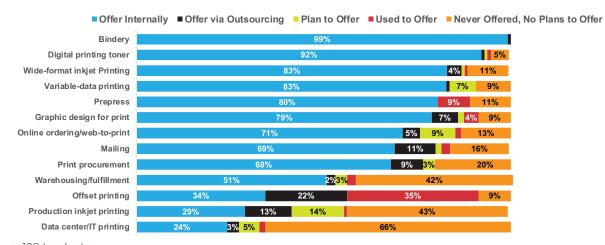
In-house printing operations are making moves to better serve their parent organizations, address competitive challenges, pursue new opportunities, and expand services — all while remaining cost-effective options.

A recent NAPCO Research survey finds in-plants are pursuing services beyond print (Figure 5). Providing services that complement and enhance print can lead to in-plants creating stronger bonds with the departments they serve, making them less likely to outsource work over a minimal cost difference. Additionally, these services can create new and recurring service streams. Key services offered, as shown in Figure 5, include:

- Nearly all in-plant respondents offer bindery services and digital toner printing
- Over 80% of in-plants report offering wide-format inkjet printing and variable-data printing
- A majority of in-plant respondents offer prepress services (80%), graphic design services (79%), and online ordering (71%)
- Over two-thirds of in-plant respondents offer mailing (69%) and print procurement services (68%), while over half offer warehousing fulfillment (51%)

### Figure 5: In-Plants' Product and Service Offering

Q. What percentage of your organization's work falls/fell/will fall into the following types of services?



n=128 In-plants

Source: Propelling Your Business Forward in an Ever-Changing Competitive Environment, NAPCO Research 2022



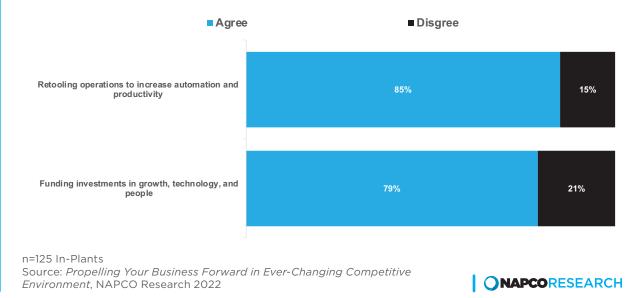




The survey also revealed that in-plants are taking action to expand their products and services to better serve customers and enhance their relevance within their parent organizations. In-plants report retooling operations to increase automation and productivity, while funding investments in growth, technology, and people (Figure 6).

## Figure 6: Investing in Operations, Growth, and People

Q. For the following statements, please indicate your level of agreement. Our operation is...



Two areas where in-plants expect to invest are equipment and application expansion. Thirty-eight percent of in-plant respondents expect to add high-speed production inkiet to their operations<sup>12</sup>.

Production inkjet offers in-plants the opportunity to bring in new business, generate additional revenue, and produce more work. Key benefits include:

- Cost-effectively printing monochrome and color jobs on one press
- Transitioning black-and-white applications to higher-value/higher-margin color products
- Extending the crossover point for digital print versus offset, helping more pages migrate to digital print
- Using variable data to print more personalized materials, which is particularly attractive for increasing communication response rates

In addition, 39% of respondents plan to add labels or packaging to their product mix. Ongoing technology development, digital printing, early adopter successes, process simplification, customer demands, and fierce competition are all forces enticing and enabling in-plants to offer labels and other types of packaging to parent organizations.

In-plants are dedicated to their parent organizations' success and are committed to providing new services to help their internal clients successfully accomplish their missions.





#### FINAL THOUGHTS

2023 offers many opportunities for print service providers to profitably grow their operations. Incorporating market trends and influences into planning decisions supports setting the course most likely to yield success.

The challenge for print service providers is not a lack of opportunity but choosing the best opportunities to pursue. The wrong choices deplete resources, fragment operations, and undermine core capabilities. The right choices contribute to profitability and sustainable competitive advantages. Use the trends, data points, and insights presented here when evaluating strategies and investments in operations, equipment, staff, and market expansion.

#### **SOURCES:**

- <sup>1</sup> NAPCO Research Annual Print Commercial Print Trends and Strategy Service, 2021
- <sup>2</sup> U.S. Bureau of Labor Statistics. "Number of Jobs, Labor Market Experience, Martial Status, and Health Results From a National Longitudinal Survey." August 2021
- <sup>3</sup> Digital printing can ease hiring challenges, as newer digital presses, like the varioPRINT iX sheetfed inkjet color press, require fewer operators and are easier to operate than offset presses. In addition, the level of training required for digital press operators is less than offset presses.
- <sup>4</sup> Propelling Your Business Forward in an Ever-Changing Competitive Environment, NAPCO Research 2022
- <sup>5</sup> Propelling Your Business Forward in an Ever-Changing Competitive Environment, NAPCO Research 2022
- <sup>6</sup> AAP's StatShot reports the monthly and yearly net revenue of publishing houses from U.S. sales to bookstores, wholesalers, direct to consumer, online retailers, and other channels; it draws revenue data from approximately 1,368 publishers.
- <sup>7</sup> The Role of Inkjet Printing and Automation in Powering Industry 4.0 in Book Publishing, BMI/NAPCO Research 2021
- Propelling Your Business Forward in an Ever-Changing Competitive Environment: Positioning Your Commercial Printing Business for Success, NAPCO Research, 2022
- <sup>9</sup> The Future of Direct Mail: An Opportunity for Unified Marketing Strategy, SG360°2021
- <sup>10</sup> Propelling Your Business Forward in an Ever-Changing Competitive Environment, NAPCO Research 2022
- <sup>11</sup> Investopedia defines the Metaverse as a "digital reality that combines aspects of social media, online gaming, augmented reality (AR), virtual reality (VR), and cryptocurrencies to allow users to interact virtually."
- <sup>12</sup> Propelling Your Business Forward in an Ever-Changing Competitive Environment: Enhancing the In-Plant Product and Service Offering, NAPCO Research 2022







# WHO WE ARE

## **NAPCO**RESEARCH

NAPCO Research 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.

NAPCO Research can help with:

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- User needs and wants
- Product features and functionality
- Content marketing strategy
- Sales strategy and tactics
- Market conditions
- Benchmarking
- Industry trends
- Brand awareness

Contact <u>research@napco.com</u> to talk with our analysts and find out how we can help you with your research needs.



# WHO WE ARE

# Canon

CANON SOLUTIONS AMERICA

At Canon Solutions America, our mission is to improve workflow efficiency and document processes for organizations of all sizes and industries. We demonstrate this mission by earning the No. 1 position in total inkjet market share, both in the U.S. and worldwide, and also lead market share for web-fed inkjet. Through our cutting-edge technologies and media support, we know that no matter the application, we'll have your solution. Canon prides itself on bringing innovative inkjet solutions to market and supporting those solutions with robust customer training and a renowned reputation for 24/7 service and support.

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