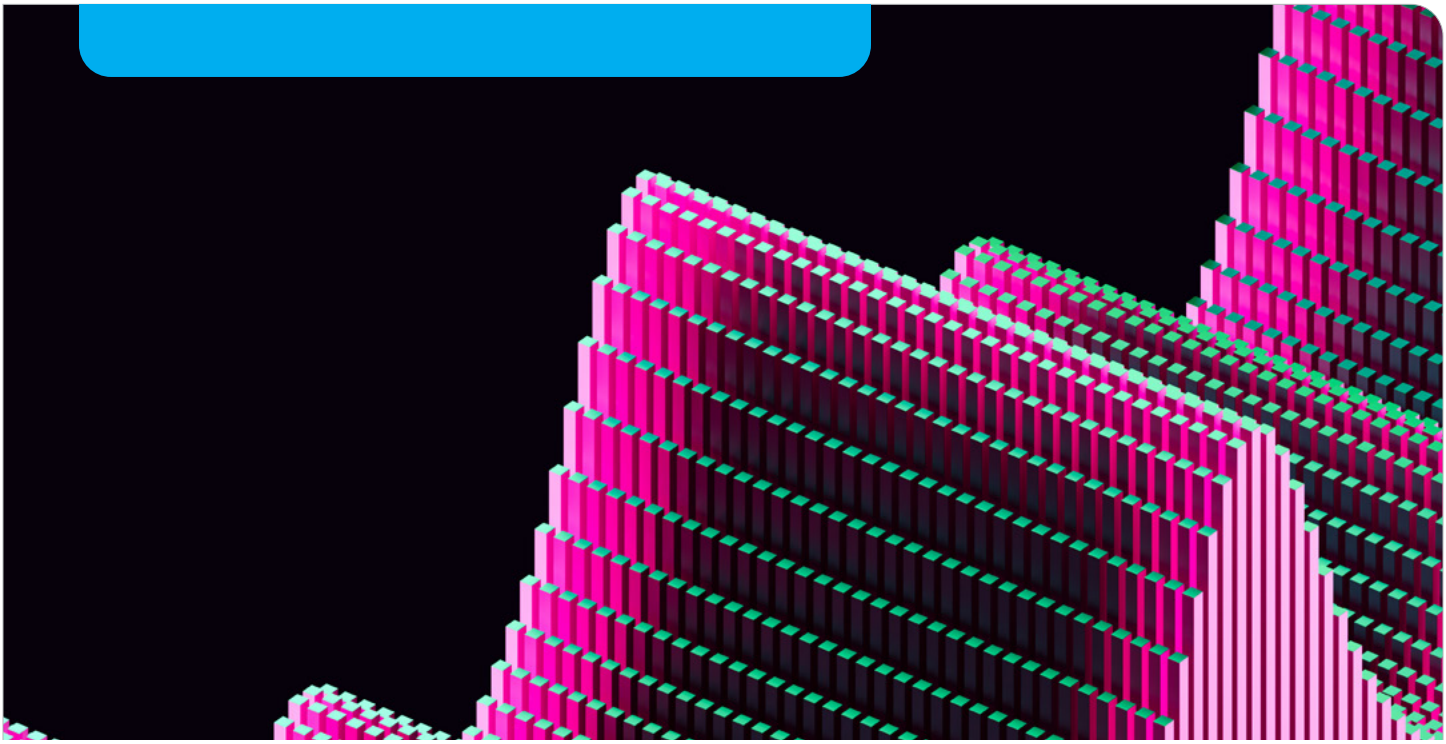

Automation at In-plants:
Increasing Efficiency, Accuracy, and New Business Opportunities

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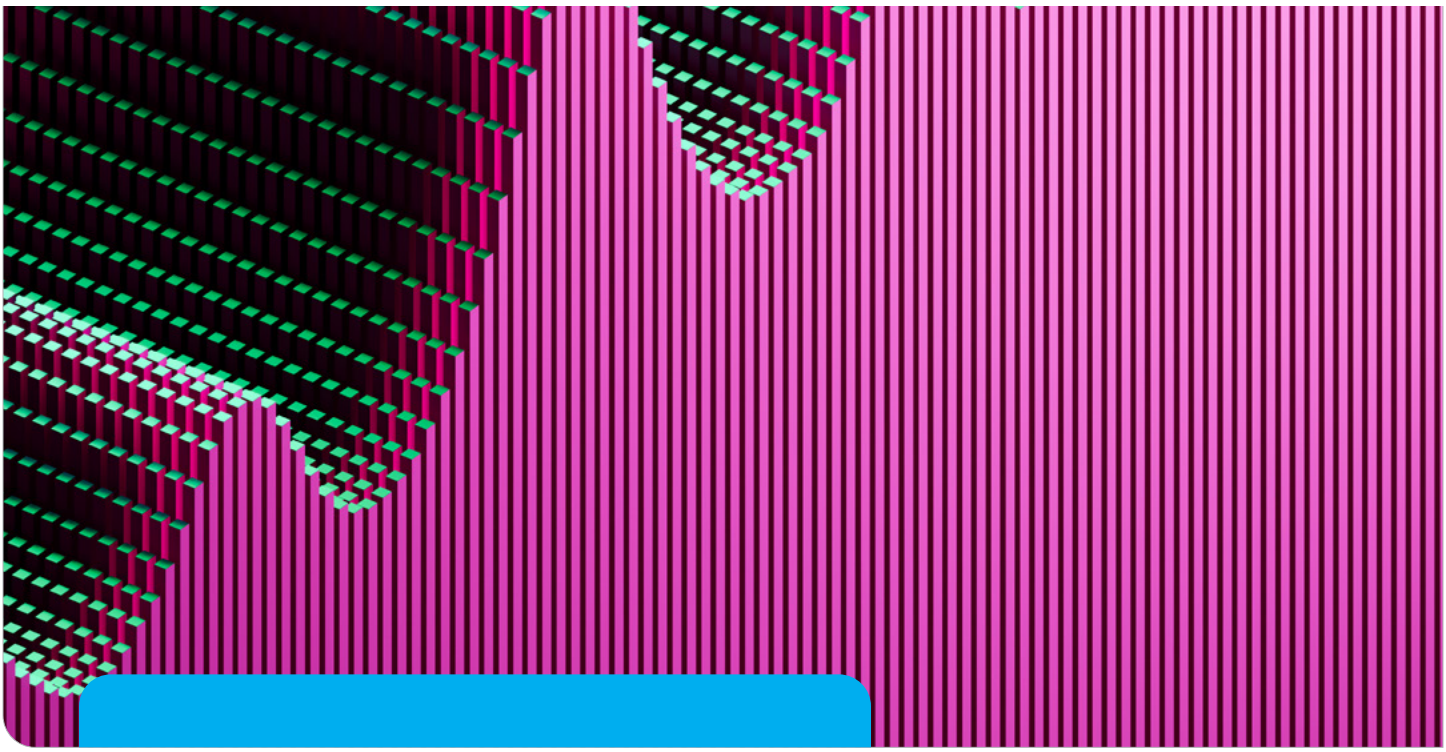

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WHO WE ARE

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Production efficiency and precision have always been top priorities for in-plants in their quests to best serve their parent organizations, so it may not come as a surprise that approximately two-thirds of in-plants surveyed in the Canon U.S.A. sponsored In-Plant Printing KPI Report Summer 2025 state they are actively pursuing automation in their facilities.

The drivers behind this increased attention on automation are multifaceted, revealing a level of urgency among in-plants to address inefficiencies in their workflow. In the report, PRINTING United Alliance uncovered that beyond boosting their productivity, in-plants are exploring automation to offset shortages of skilled labor, lower costs, and reduce errors.

This white paper leverages survey findings from this latest In-plant Printing KPI Report and articles from *In-plant Impressions* to provide a deep dive into in-plants' automation journeys, covering:

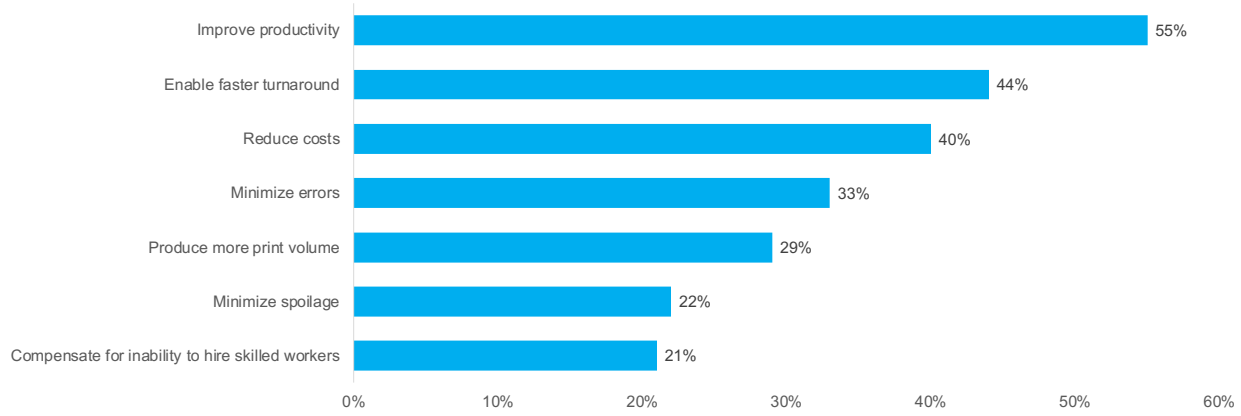
- Why in-plants are prioritizing automation
- Automation's role amidst a challenging labor landscape
- How automation can aid in in-plants' growth

SPEED AND PRECISION ARE TOP IN-PLANT PRIORITIES

The drivers behind in-plants' decisions to pursue automation vary. Production speed is at the top of the list, with nearly 55% of in-plant respondents to the PRINTING United survey reporting actively seeking automation solutions to improve their productivity. Meanwhile, nearly 44% report pursuing automation to achieve faster turnarounds **(Figure 1)**.

Figure 1: **Productivity and Speed are Top Automation Drivers**

Q. For Which Reasons are you actively seeking automation features on equipment or workflow?



n=85 in-plants actively seeking automation features
Source: PRINTING United Alliance, 2025, In-plant Printing KPI Report Summer 2025, Sponsored by Canon U.S.A.

Accuracy is another element in-plants can address via automation, as survey respondents identified production errors have emerged as a key challenge. In fact, 20% of respondents reprint more than 4% of their jobs, which exposes these in-plants to added costs, production time, and dissatisfied customers. Nearly one-third (32%) of in-plants report a reprint rate of more than 2%, leaving slightly more than half (52%) with a reprint rate of 1% or less, which is a target all in-plants should strive for.

Improving accuracy is a key motivator for automating, and 33% of survey respondents report that minimizing errors is a key automation driver, while more than 20% report seeking out automation to minimize spoilage in production.

At in-plants where data security is a top priority, any measure to eliminate errors should be considered. For example, a January 2025 *In-plant Impressions* article reviews how the in-plant at Careington, a Frisco, Texas-based dental, vision, and other health and wellness-focused savings plan provider, keeps sensitive information under wraps. To ensure the highest levels of security, Careington's employees monitor real time data throughout the entire production process and can pinpoint the precise status of any job.

As Martin Schneider, assistant VP of Print, Production, and Logistics, told *In-plant Impressions*, this real time data reporting not only provides peace of mind for all stakeholders, but it also offers cost savings versus outsourcing.

"On the labor front alone, I'd actually have to have a larger staff for vendor management than I do for actual production," Schneider said.

On the efficiency side, much of the automation at Careington is delivered by its investment in Alchem-e, a workflow automation software platform from Racami. With this solution, Careington can automatically comingle and group similar jobs to run together on the in-plant's four Canon imagePRESS V1000s. The software also provides job tracking and inventory management features, enhancing operational efficiency even further.

AUTOMATION TO ADDRESS LABOR CHALLENGES

One of the top advantages automation brings to manufacturing environments is its ability to reduce reliance on human intervention. Data from the In-Plant Printing KPI Report reveals that the desire among in-plants to automate can be contingent on the operation's number of employees.

Among mid-size to larger in-plants, the active interest in automation is more widespread, as 81% of those with five to 19 employees are exploring automation, along with 78% of respondents with 20 or more employees. Meanwhile, for smaller in-plants with fewer than five employees, it's nearly a 50/50 split, with 48% of respondents seeking automation **(Table 1)**.

Table 1: **Larger In-plants Report More Automation Interest**

Q. Are you actively seeking automation features on equipment or workflow automation?

	Fewer than 5 Employees n=48	5 to 19 Employees n=47	20 or more Employees n=51
Yes	48%	81%	78%
No	52%	19%	22%

Source: PRINTING United Alliance, 2025, In-plant Printing KPI Report Summer 2025, Sponsored by Canon U.S.A.

Large in-plants were also the most likely to report investigating automation solutions due to the inability to hire skilled workers, with 37% indicating this to be a decision driver. Smaller operations place this as a lower priority, at 26% of mid-size in-plants and just 8% of small in-plants.

Labor and workforce related challenges have been common throughout the printing industry, but in larger plants, the need for skilled employees is more prominent. At larger in-plants, finding enough candidates to accommodate the volume of work and number of positions to be filled can be difficult. Investment in automation to fill the gaps can help these shops ensure they are keeping up with workload demands.

One of the nation's largest in-plants, the U.S. Government Publishing Office (GPO), has made sizable investments in automation as it contends with ongoing labor shortages. In October of 2024, *In-plant Impressions* reported that the

GPO had 453 employees, which was 57 fewer than in fiscal year 2021. Investment in production inkjet printing has been a core factor in the GPO's automation journey, as *In-plant Impressions* reports the replacement of six web offset presses with four Canon ColorStream 6900 inkjet presses and one Canon VarioPrint i200 cut-sheet inkjet press helped improve on time delivery from 89% to 95%. Additionally, just one operator is needed to run an inkjet press — noticeably fewer than the six the GPO required to operate one of its prior web offset presses.

SERVING EXTERNAL ORGANIZATIONS

While in-plants primarily exist to serve their parent organizations, it is common for these print service providers to extend their offerings to others in their community. In fact, in the In-Plant Printing KPI Report, approximately 58% of respondents report performing work for external clients, and among those respondents, one-third indicate that outside work is increasing.

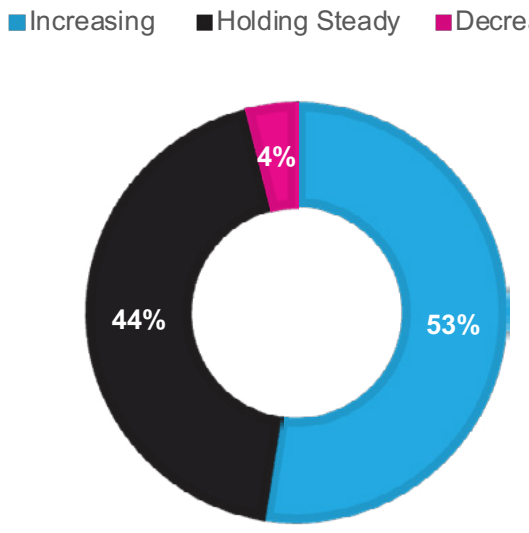
When asked about their automation plans, in-plants that perform outside work were more inclined to be actively exploring automation, as nearly 74% of respondents serving external clients are looking into automation solutions. Meanwhile, among those that only serve their parent organization, approximately half of respondents are looking into automation options.

Organizations that insource work from external sources can expect an increased level of complexity in their operations. In addition to managing a higher number of clients and their own distinct requirements, data shows that companies that work for outside organizations are increasing the quantity of services they offer. Specifically, 53% of respondents that serve external clients report an increase in the services they also offer their parent organization. Further, nearly 70% report having added new services over the past two years. Interestingly, this is the inverse of in-plants that only serve their parent organization, among which 70% have not added new services in the past two years **(Figures 2 and 3)**.

Figure 2: **Insourcing In-plants Report Increasing Services**

Q. Is the number of services you provide to your parent organization increasing, holding steady, or decreasing?

IN-PLANTS THAT WORK FOR COMPANIES OUTSIDE PARENT ORGANIZATION



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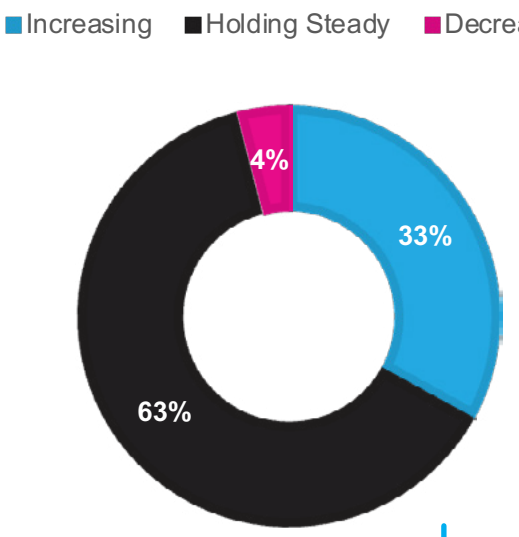
IN-PLANTS THAT DO NOT WORK FOR COMPANIES OUTSIDE PARENT ORGANIZATION



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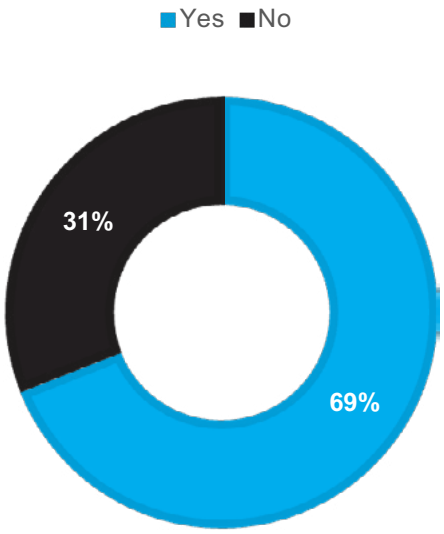
Source: PRINTING United Alliance, 2025, In-plant Printing KPI Report Summer 2025, Sponsored by Canon U.S.A.

Figure 3: **Insourcing In-plants Report Recent Service Additions**

Q. Have you added services in the last two years?

IN-PLANTS THAT WORK FOR COMPANIES OUTSIDE PARENT ORGANIZATION



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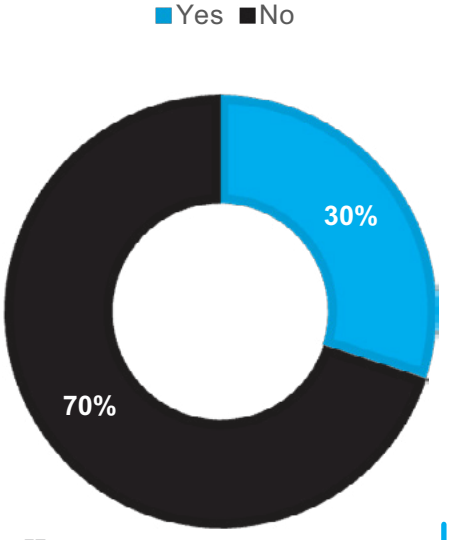
IN-PLANTS THAT DO NOT WORK FOR COMPANIES OUTSIDE PARENT ORGANIZATION



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Source: PRINTING United Alliance, 2025, In-plant Printing KPI Report Summer 2025, Sponsored by Canon U.S.A.

With this increased complexity level, automation becomes a logical solution. And for in-plants that can insource successfully, it results in wins all around. For example, in an August 2024 article in *In-plant Impressions*, Tina Wolfgram, manager of Printing Services at the University of Wisconsin - Eau Claire, shared that approximately one-third of the in-plant's work stems from insourcing. She adds that the cost of external work helps keep prices in check for university jobs, a benefit for the in-plant's parent organization.

"We haven't had price increases for quite some time for campus because we mark up," Wolfgram told *In-plant Impressions*. "The people from outside, they pay a premium. They pay higher than what our departments pay. And so, with us having that revenue come in, it helps us keep our pricing for campus pretty status quo. And outside people are still getting a great price, it's just higher than if they were a [university] department."

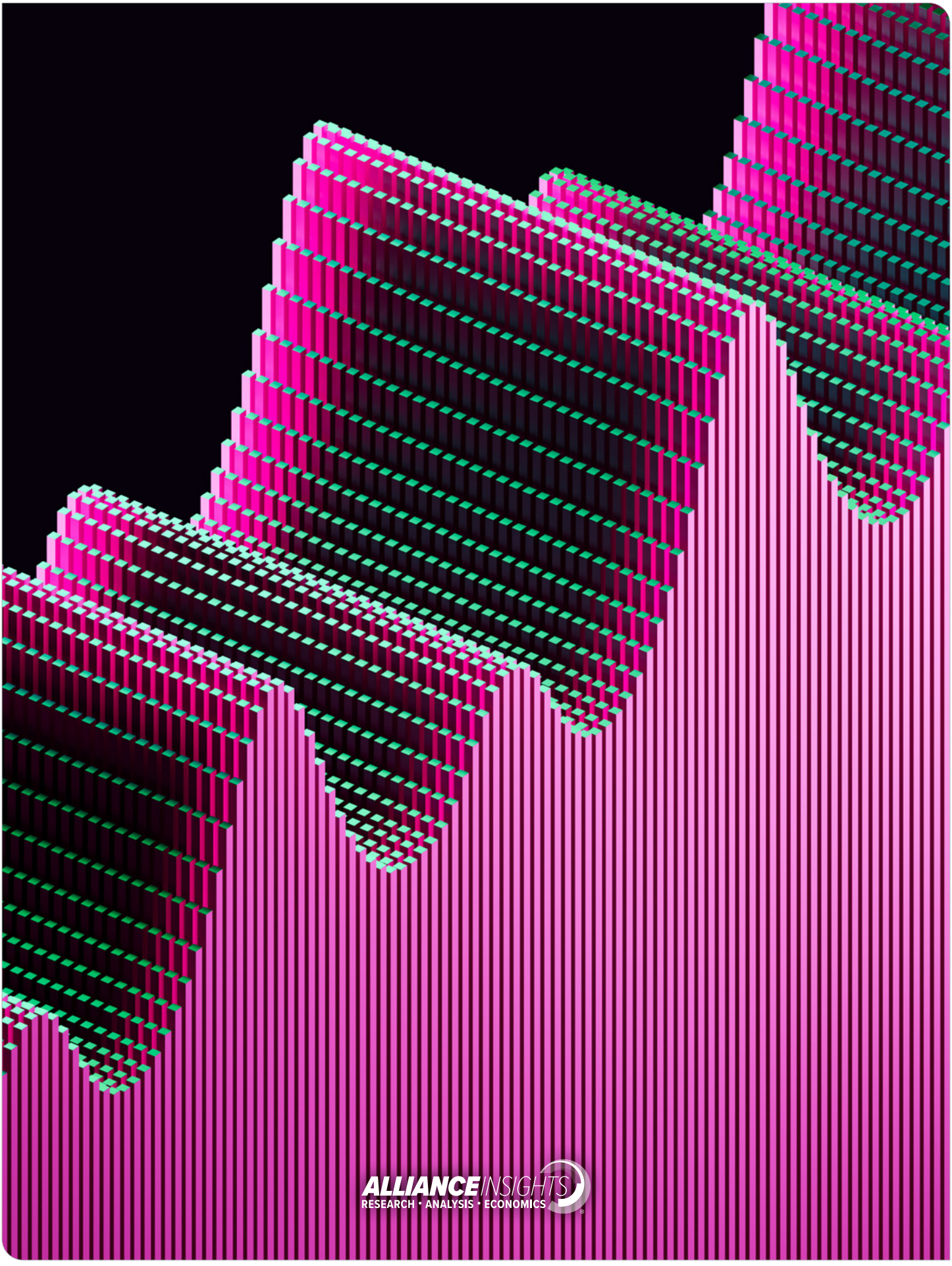
CONCLUSIONS AND RECOMMENDATIONS

In-plants, like any print service provider, need to operate faster, ensure accuracy, and be flexible to take on new business opportunities. In a challenging economic and labor climate, investing in new equipment and employees is not always a possibility. Automation, however, can provide in-plants with productivity boosts, reduced errors, and the ability to nimbly take on the complexity of new services or new external clients.

In addition to automation in production, which can increase speeds and aid in-plants amidst labor constraints, automating data delivery to help employees keep track of jobs and secure information can help in-plants reduce errors and mitigate risks. While maintaining human oversight over operations is important, with any human-driven task is the possibility for human error. Avoiding costly reprints both saves time and money and helps in-plants maintain strong relationships with their customers and parent organizations.

Attracting, hiring, and retaining skilled employees remains a top obstacle across all print segments, and has been a key catalyst in in-plants investigating automation. Particularly among larger in-plants, automation has gained noticeable attention as they produce higher volumes of work and have more positions to fill. For these in-plants, investing in digital technologies that can replace conventional printing can be an ideal way to maintain efficiency with a reduced headcount. Replacing offset efficiency can be challenging, but with streamlined workflows, in-plants have proven that digital printing can be a viable option in place of offset.

In-plants are also feeling pressure to grow and bring in more revenue. For many in-plants, insourcing work from external clients can be a primary revenue source, but it does add complexity to the operation. Automation solutions can help produce an increased workload and help with the additional data management that comes with additional clients. At a time when speed, accuracy, costs, and growth are all essential for in-plants, those that invest in automation solutions will bring the most benefit to the entirety of their stakeholders.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