KEYPOINT INTELLIGENCE

The Use Case for Artificial Intelligence in Production Print

ANALYSIS   October 2025

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INTRODUCTION

Artificial Intelligence (AI) is one of the major buzzwords of our time. What it can accomplish is sometimes clouded by the breadth of the boasts and marketing surrounding it. The way the term is bandied about in news articles, advertisements, and other promotions, you would think that everything in the world today is AI-enabled. In an effort to clarify AI's impact within the context of production printing, this document references recent research that shows what marketing and printing professionals are thinking about the potential for AI. We will cover where AI is being used and how businesses expect it to impact them moving forward.

WHAT IS AI… AND WHAT IS IT NOT?

The AI term is used extensively today to highlight computer automation, even when that automation is not reliant on AI techniques. We'll start with a definition of AI that narrows it down a bit closer to what it means to production printers. In the July 2025 Printing Impressions webinar entitled AI for Printers: Cautionary Tales and Extreme Success, panel members Pat McGrew, Ryan McAbee, and Nick Benkovich defined what AI really is, while also describing what it is not.

According to the panel members, AI is not:

♦ *A Silver Bullet:* It will not entirely replace skilled humans or business strategy.

♦ *A Replacement for Human Thinking:* AI predicts based on patterns. It doesn't do any thinking or understanding in the way that a human does.

♦ *Immune to Errors:* AI can hallucinate, invent data, or replicate bias if not used carefully.

Here is how they see AI:

♦ *It is a Set of Tools:* AI learns patterns in a data set and can make predictions or generate content using a variety of techniques, including:

  o *Machine Learning:* Models that analyze data to improve performance on a given task.

  o *Discriminative AI:* Models that classify data using a clustering technique, but are not able to generate new content in the way that Generative AI does.

  o *Generative AI:* Models that learn to identify patterns and structures in the data that they are trained on, which they then use to produce new content.

- ◆ *It is Useful for Automation of Repetitive Tasks:* AI can analyze large volumes of data and create dynamic content.
- ◆ *It is Already Ubiquitous:* AI can be found in many tools that you may already use, including ChatGPT, Photoshop Generative Fill, and predictive reports from Management Information Systems (MIS).

AI USE BY PSPS

In Keypoint Intelligence's 2024 North American Software Investment Outlook, print service provider (PSP) respondents were asked how they were using AI in their printing operations. As shown in the Figure below, graphic design (31%) and marketing (26%) came out on top by a fairly wide margin.

Figure 1: AI Use Today

How are you currently using artificial intelligence in your printing operations?
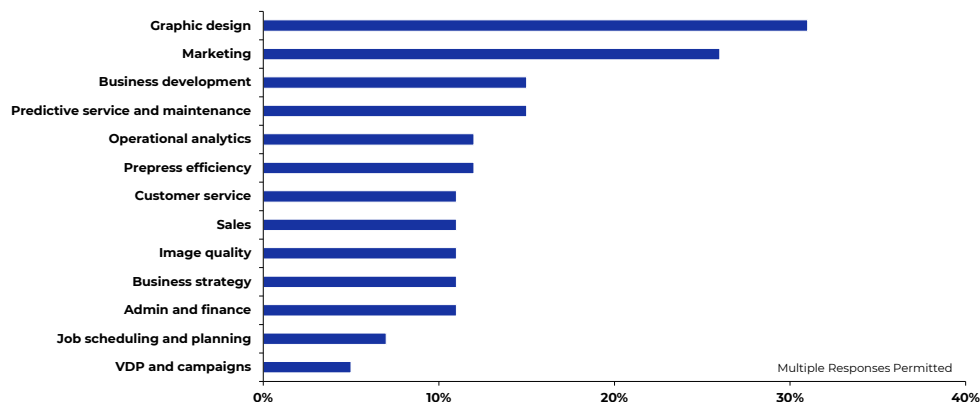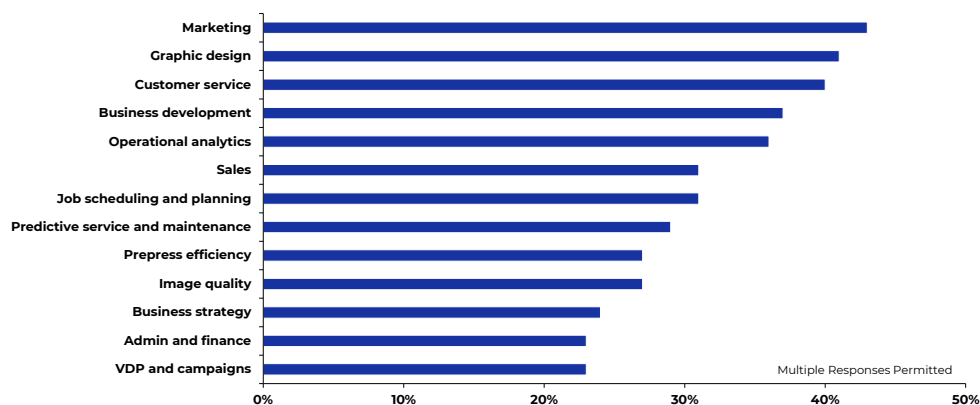

Source: *North American Software Investment Outlook*; Keypoint Intelligence 2024

Respondents were then asked how they hoped to use AI in the future. Looking forward, PSPs expect marketing (now in the top spot at 43%) and graphic design (41%) to be the top uses for AI, but they anticipate that several other items will gain importance in the future. Moving up significantly in terms of ranking are customer service (40%), business development (37%), and operational analytics (36%).

Figure 2: AI Use in Two Years

How do you hope to use artificial intelligence in your printing operation over the next 2 years?

Source: *North American Software Investment Outlook*; Keypoint Intelligence 2024

MARKETERS' EXPECTATIONS FOR AI

In the same survey, managers with responsibility for marketing communications budgets were asked a number of questions related to AI. Purchases of AI software technologies outranked all other technology purchases, so clearly, AI is top of mind for this segment. They report that they most commonly use AI for these purposes:

- Generating marketing content
- Analyzing customer behavior
- Segmenting target audiences
- Personalizing campaigns
- Optimizing send times

Their expectation is that over the next two years, AI will impact their direct marketing communications in the following ways:

- Cost reductions
- Improved efficiency and accuracy
- Enhanced personalization
- Faster response times
- Better compliance management

As to which areas that AI will affect the most, respondents identified predictive analytics (56%) as the top choice, followed by campaign personalization (50%), content creation (46%), send-time optimization (44%), and audience segmentation (42%).

Figure 3: AI's Effect on Marketing Communications

In which of the following areas do you expect AI to affect marketing communications the most? (Top Responses Only)
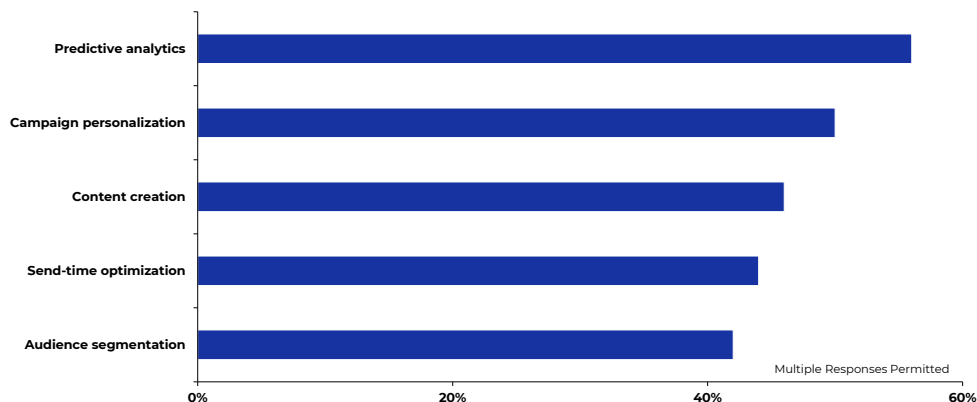
Source: *North American Software Investment Outlook*; Keypoint Intelligence 2024

AI ADOPTION AMONG PSPS

The 2025 Alliance Research study entitled *AI Adoption in the Printing Industry: From Curiosity to Competitive Advantage* provides additional insight on what printers in North America are thinking about AI. A 32-page summary is available as a free download on the Printing United / Alliance Research printing.org website.

The study's authors believe that the printing industry is "at a turning point" and conclude that "Artificial intelligence is no longer experimental in printing. Printers are already using it to accelerate quotes, improve quality, and strengthen customer relationships." This e-mail questionnaire of over 200 PSPs was supplemented by interviews with PSPs. During these interviews, PSPs shared insights on their experiences with AI.

On average, respondents stated that they had only been using AI for about a year and a half. Meanwhile, 23% of them had never used it at all. When asked about their top applications, six stood out: Generative AI (design/copy) at 57%; marketing personalization at 38%; customer support (chatbots, virtual assistants) at 26%; sales (automate administrative tasks, score leads) at 23%; job scheduling/workflow optimization at 21%; and production automation at 16%. As was the case with the Keypoint Intelligence study, design and marketing ranked high.
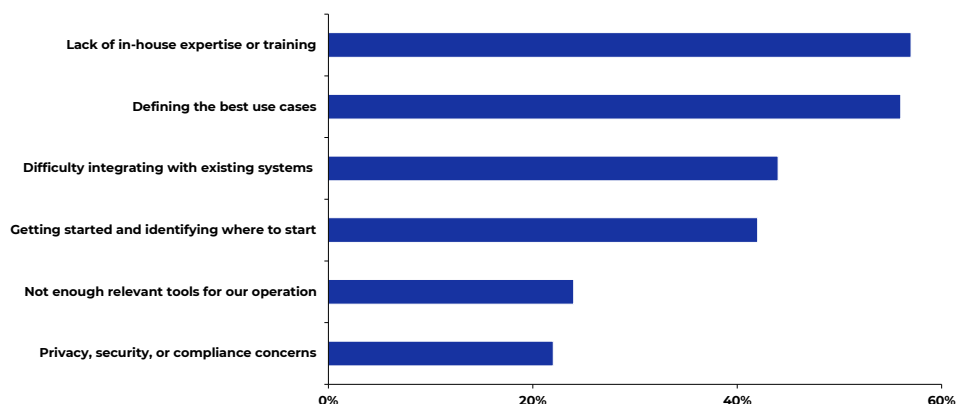
Figure 4: Top AI Applications
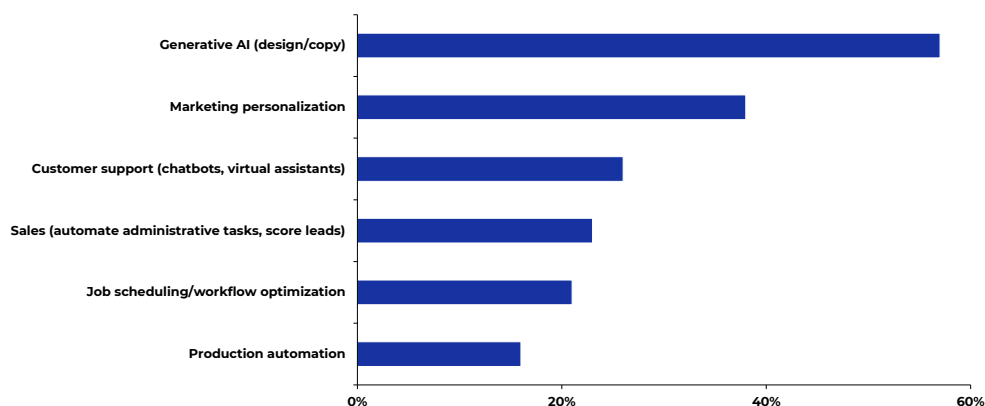
Source: *AI Adoption in the Printing Industry: From Curiosity to Competitive Advantage*; Alliance Insights 2025

When asked about their top challenges, respondents to the Alliance Insights study cited: Lack of in-house expertise or training (57%); defining the best use cases (56%); difficulty integrating with existing systems (44%); getting started and identifying where to start (42%); not enough relevant tools for our operation (24%); and privacy, security, or compliance concerns (22%). These issues are natural enough given the newness of AI for so many PSPs.

Figure 5: Top Challenges in AI Implementation

Source: *AI Adoption in the Printing Industry: From Curiosity to Competitive Advantage*; Alliance Insights 2025

Perhaps of most interest in the Alliance Insights report are the comments from PSPs who are currently using AI. Examples cited in the report include:

◆ *Automating shipping estimates:* A commercial printer with revenues in the $20 to $40 million range used AI to automate their shipping estimates, cutting the process from 4 hours to 2 minutes, while maintaining accuracy within 5% of manual calculations. This resulted in reduced manual labor and improved responsiveness. A similar effort was undertaken by a $40 to $60 million commercial printer to allow them to give an instant answer for their freight quoting.

- *Reducing job set-up times:* A commercial printer with revenues in the $20 to $40 million range implemented an AI-driven job quoting system to streamline the onboarding of new work. This resulted in shortened setup time while also minimizing administrative bottlenecks and improving customer satisfaction.

- *Improving finance and operations tasks:* A commercial printer with revenues in the $20 to $40 million range installed an AI-powered accounts payable system that automatically matches invoices to purchase orders. This system offered reporting tools and predictive maintenance applications. This helped remove repetitive and error-prone tasks that freed staff to focus on exceptions, problem-solving, and customer service. Another PSP, in this case a $150 million to $200 million sign and graphics provider, automated its accounts payable approvals using AI.

- *Enhancing client communication:* A commercial printer with revenues in the $150 to $200 million range is using AI to rewrite customer e-mails to improve clarity and professionalism. The AI also uses software to review thousands of weekly interactions and can flag areas of customer distress as well as positive customer moments.

- *Estimating:* A commercial printer with $17 million in annual revenues applied AI to reduce the time it takes to provide estimates, thereby accelerating the turnaround time on quotes.

- *Reducing administrative workloads:* An apparel decorator with $15 million in annual revenues is using AI to free up employee time for higher-value activities by reducing tasks that took 20 hours down to 15 hours or less. The company describes AI as being like having "a free intern but you still have to check its work."

Acknowledging that AI faced institutional barriers, interview participants identified common concerns that they had heard from employees and management including overcoming the fear of job loss; struggling to find a good starting point; challenges integrating into existing systems; and overall skepticism (particularly after some early AI failures). One PSP suggested that attitudes could be shifted through small wins like showing how incremental time-savings improvements really mattered.

OPINION

You might think that AI is still in its early days, but even with all the hype it's clear that at least some aspects of AI have been around for a while. For example, you've probably heard the term robotic process automation (RBA) being used for automating repetitive tasks such as in the following scenario: If it is this customer and this specific application at this run length range, then the job should be run on this press using this substrate, this finishing method, and shipped to this address. In this sense, RBA can be seen as a precursor to AI.

Some of the horror stories around AI come back to inappropriate use cases. For example:

♦ Basing decisions on substandard data submitted to an AI system (garbage-in/garbage-out)

♦ Uploading private data to an AI tool and risking that the information becomes public

♦ Expecting AI to fix buggy computer code

You should think of AI as a person you are having conversation with—perhaps like an inexperienced intern who is not familiar with your business. In that regard, never forget that to be successful, you must "train" AI and validate the results that it returns before you put such a system into action.

One last piece of advice from early users is that it's important to take AI seriously. Using free AI tools presents risks since you don't know what sources it draws on and whether using it presents privacy risks for you or your clients. According to industry expert Pat McGrew, you should think twice about using an AI tool unless you're willing to pay for it. That's very good advice!

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Comments or Questions?
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