

DIGITAL PRINTING 5.0 THE RISE OF THE DIGITAL PRINT ENHANCEMENT OPPORTUNITY



A NAPCO Research Study and White Paper
Sponsored by Canon U. S. A., Inc.

THE RISE OF THE DIGITAL PRINT ENHANCEMENT OPPORTUNITY

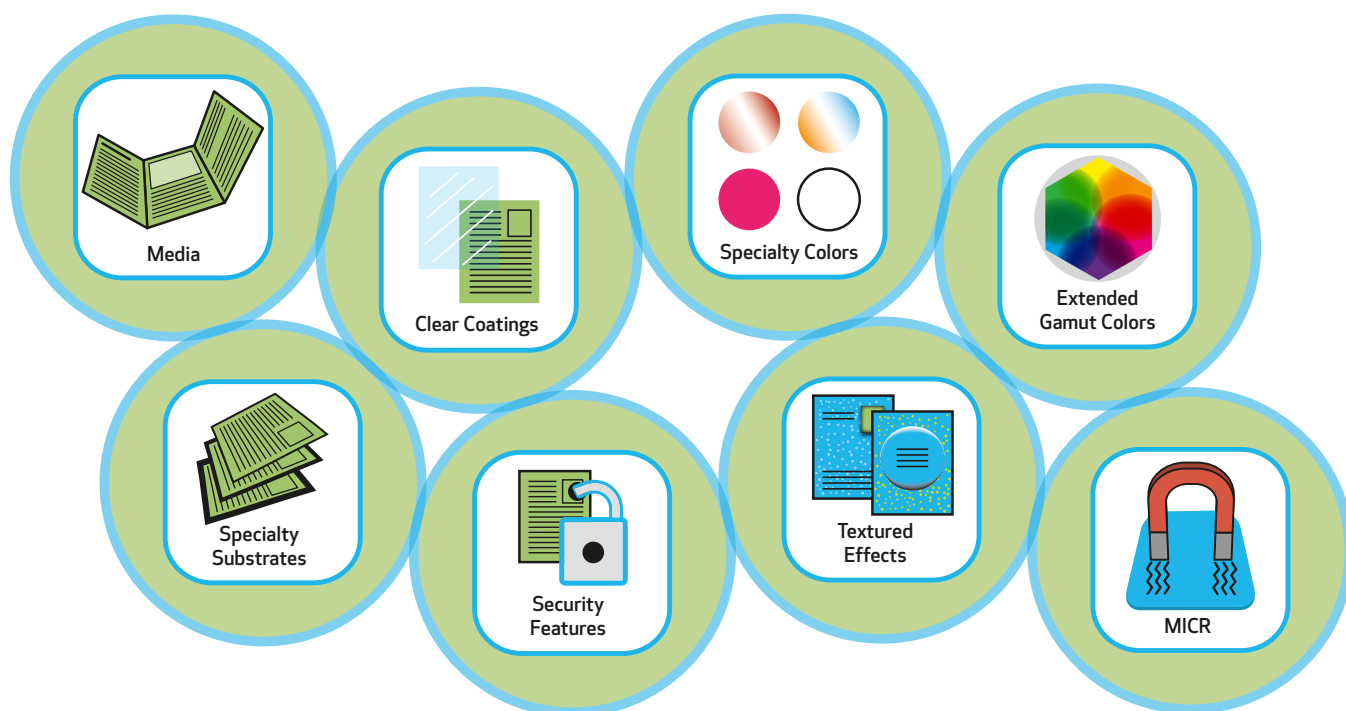
Print embellishment, or enhancement, represents a growing trend. Print providers and marketers are looking for new effects to differentiate their printed materials from competitors and add value to print. Ongoing advances in digital printing devices and finishing solutions are enhancing the power of print by enabling providers to print on a broader range of substrates and produce eye-catching, special effects to create printed pieces that get noticed. These new capabilities encompass printing on a variety of substrates and offer various embellishment techniques to make print stand out.

A number of today's commercially available digital printing devices and finishing solutions support the printing of special effects and embellishments to enhance digital output. These imaging capabilities can transform printed materials from commodity, price-sensitive offerings to higher-value products that command a premium. These new innovations are powering a new industry phase described as **Digital Printing 5.0**.

There are many options for enhancing the value of digitally printed applications, including spot colors, clear coatings, specialty colors, extended color gamut work, textured effects, security features, and MICR. In addition to special effects, another important consideration in enhancing digital printing is a device's substrate capabilities.

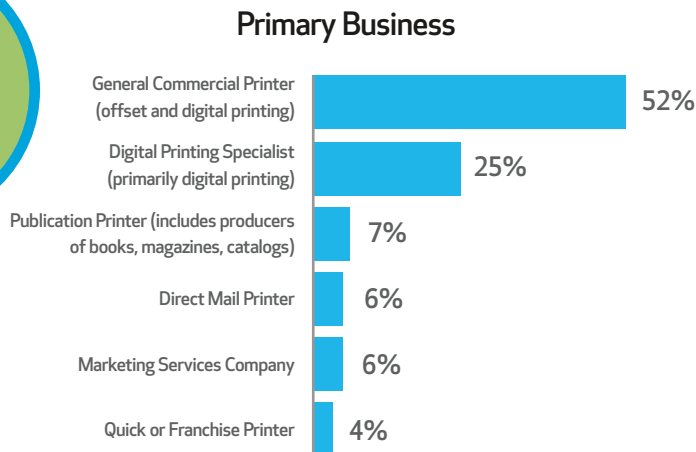
Digital Printing 5.0

Advancing the value of digitally printed applications



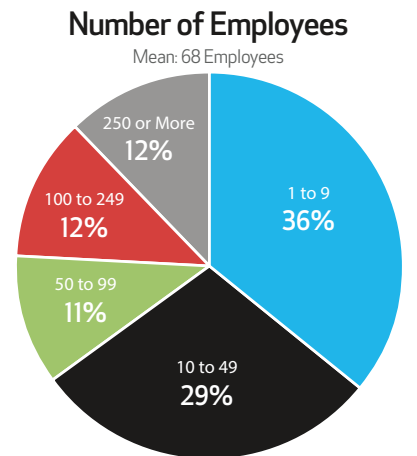
A new NAPCO Research* study and white paper, sponsored by Canon U. S. A., Inc., offers insights on how print service providers (PSPs) are leveraging digital printing to boost efficiency, better serve customers, and output print products once considered not possible on digital devices. The study, *Digital Printing 5.0*, surveyed 233 commercial printers and 174 in-plants to uncover key and evolving trends that are advancing the use of digital printing. Figures 1 and 2 describe the types of printers participating in this study.

Figure 1
Commercial Printer Respondent Base



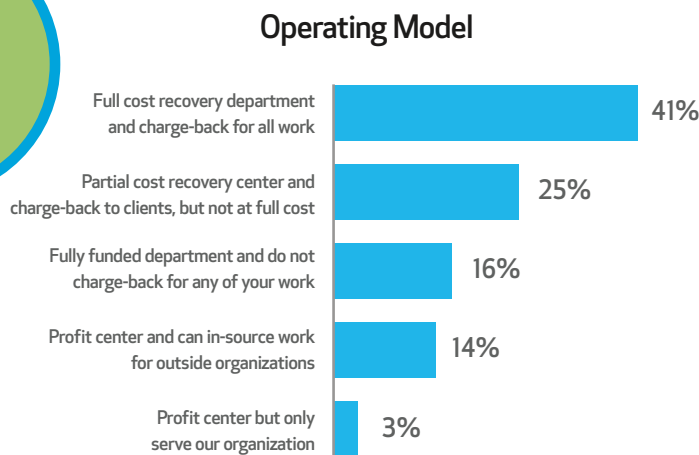
Q. Which category best describes your company's business? Single response.
N = 233 Commercial Printers

Source: *Digital Printing 5.0* NAPCO Research 2019



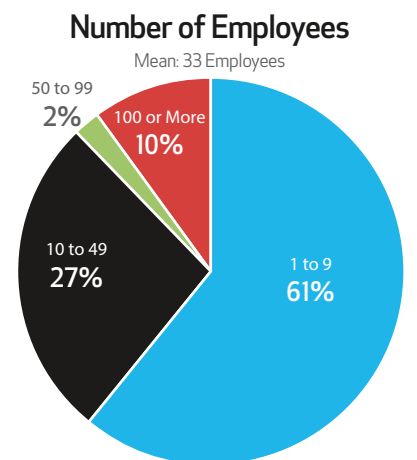
Q. How many employees work at your company or in-plant?
N = 233 Commercial Printers

Figure 2
In-Plant Respondent Base



Q. Which of the following describes your in-plant operation?
N = 174 In-Plants

Source: *Digital Printing 5.0* NAPCO Research 2019



Q. How many employees work at your company or in-plant?
N = 174 In-Plants

*A unit of NAPCO Media, the parent company of Printing Impressions and In-Plant Impressions.

Digital printing is perfectly suited to offer the value-add techniques and processes that print buyers covet, with unique finishing options like foiling, die-cutting, embossing, textures, special coatings, and overprinting. **A key part of the research focused on print providers' use of techniques to enhance the value of digital printing and better understand the utilization and challenges associated with these print applications.** Many printers are looking for new value-add print applications to help boost their profit margins and differentiate their offerings. As a result, there's a growing interest in incorporating special effects/techniques that enhance visual appeal.

Many types of embellishments, such as extended colors, specialty colors, embossing, and specialty coatings, aren't new because commercial printers have produced them on offset presses. Now, however, these print enhancements are also available on digital presses and new finishing solutions. The NAPCO Research study found that print providers are leveraging these innovations to enhance the value of on-demand printing. Commercial printers and in-plants participating in the survey report offering various types of print enhancements.

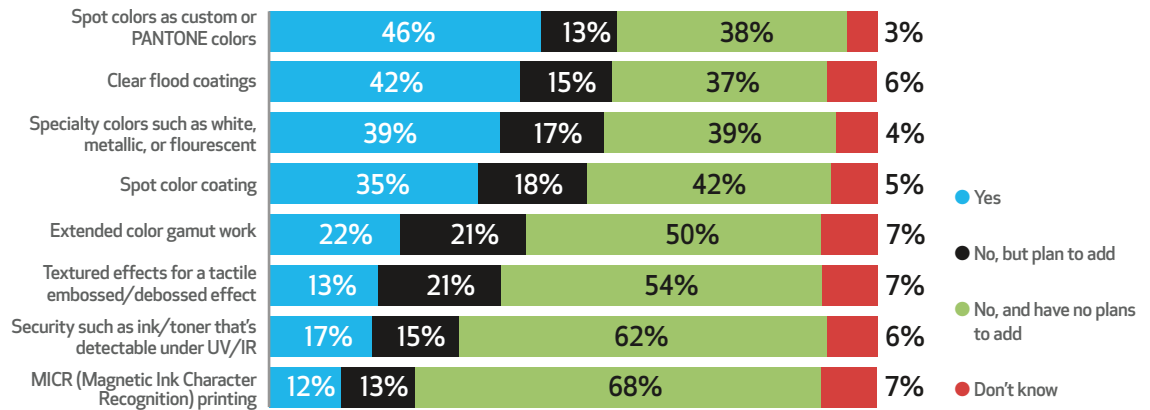
Unique imaging capabilities can help transform printed materials from commodity, price-sensitive offerings to higher-value products that command a premium. There are many options for enhancing the value of print applications, including the following:

- **Specialty effects** are unique toners/inks that are outside of the standard process or spot colors, such as metallics, foils, fluorescents, UV/IR (for security applications), and white (for printing on clear or colored substrates).
- **Spot or flood coating**, where an imaging unit or finishing system is capable of applying a spot or flood coat of a clear matte, gloss, or satin finish. Spot coating enables special effects like watermarking, while a flood coating offers a matte or gloss finish and provides a protective layer against scratching.
- **Spot colors**, where an additional imaging unit can apply a standard highlight color (e.g., red, green, or blue) or a custom color that matches a particular corporate brand or other desired color.
- **Expanded color gamut** that includes a single color or multiple colors; this is common in many wide-format printing systems.
- **Textured effects** that include a tactile, raised, embossed/debossed effects.
- **Enhanced security** with MICR, infrared (IR), or ultraviolet (UV) inks that are only visible under special lighting conditions. These inks/toners are often used for tickets, identity cards, and other secure documents.

Producing Special Effects on Digital Output is Still in the Early Stages

Commercial printers are starting to incorporate special effects on their printed output, but there are still many firms that are not (Figure 3). The top special effects/techniques commercial printers report producing on digitally printed output include spot colors, clear flood coatings, and specialty colors. Almost three-quarters of commercial respondents own digital wide-format devices, which could account for the high use of extended color sets.

Figure 3
Commercial Printers Producing Special Effects



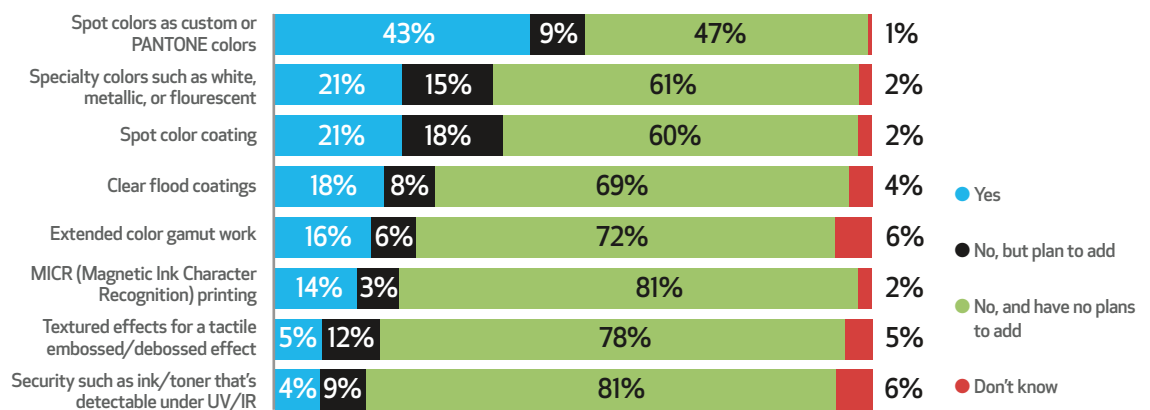
Q. Does your operation offer any of the following special effects and/or techniques on your digitally printed output?
N = 180 Commercial Printers

Source: Digital Printing 5.0 NAPCO Research 2019

More than one-third of respondents don't offer special effects and/or techniques on their digitally printing output and have no plans to offer the capabilities.

As for in-plants surveyed, spot colors (such as custom mixed or PANTONE colors), specialty colors (such as white, metallic, or fluorescent), and clear coatings are top special effects offered on digitally printed output (Figure 4). Although 43% of in-plants surveyed currently offer spot colors, respondents anticipated little growth in its use. Overall, in-plant respondents report little interest in using digital presses to print embellishments.

Figure 4
In-Plant Printers Producing Special Effects



Q. Does your operation offer any of the following special effects and/or techniques on your digitally printed output?
N = 131 In-Plants

Source: Digital Printing 5.0 NAPCO Research 2019

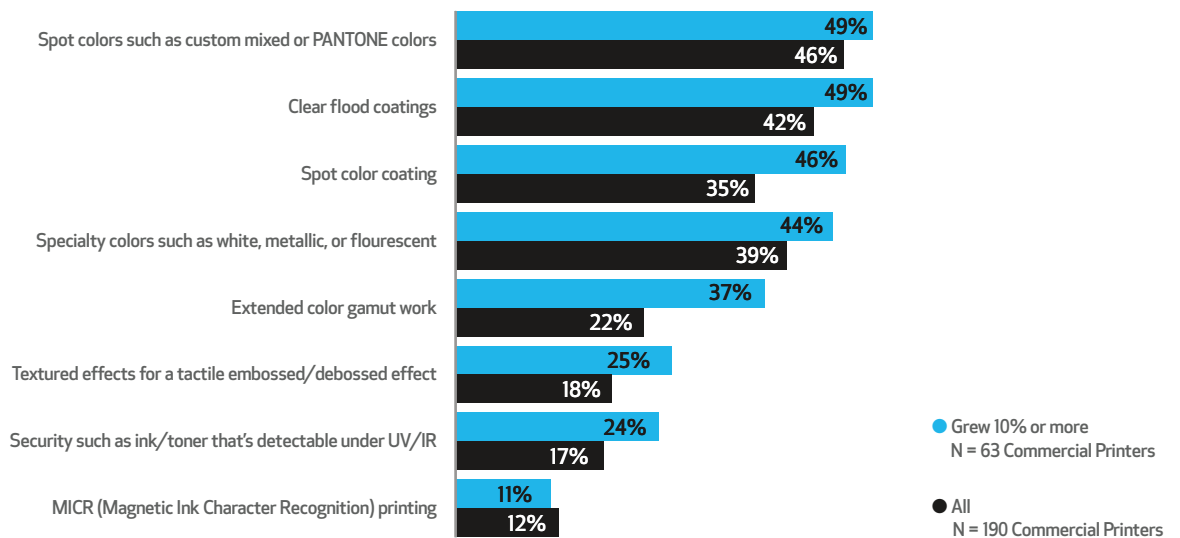
Firms Reporting High Growth More Likely to Offer Special Effects

One factor that may increase the use of special effects on digitally printed output is the finding that respondents who reported double-digit sales growth are more likely to offer print enhancements (Figure 5).

The top two enhancements offered by all commercial printer respondents and those reporting double-digit sales growth are the use of spot colors and clear flood coatings. Flood coatings are popular because they're often used to provide a protective layer against scratching or scuffing, in addition to providing a matte or gloss finish.

Other key special effects and/or techniques the commercial printers reporting double-digit sales growth offer include spot clear coatings, specialty colors (such as white, metallic, or fluorescent), extended color gamut work, textured effects, and security ink/toner.

Figure 5
High-Sales-Growth
Commercial Printers
Offer More
Enhancements

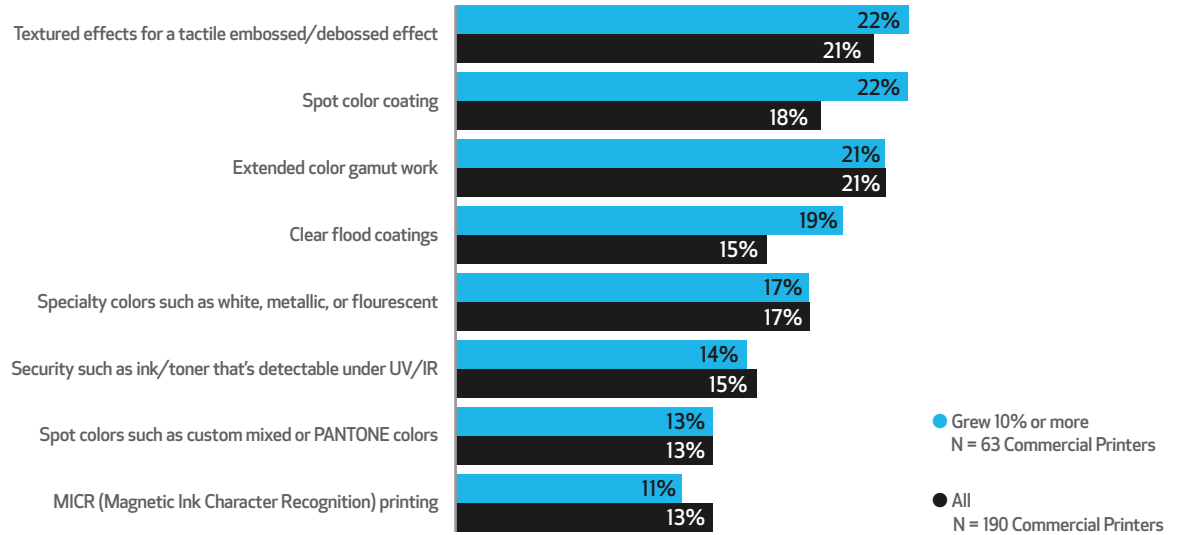


Q. Does your operation offer any of the following special effects and/or techniques on your digitally printed output?

Source: Digital Printing 5.0 NAPCO Research 2019

Going forward, commercial printers reporting double-digit sales growth report they were more likely to add print enhancements than were total respondents (Figure 6). Those firms reporting double-digit sales were planning to add textured effects, spot clear coating, and an extended color gamut to their digital printing offerings.

Figure 6
High-Growth Firms Plan to Offer More Print Enhancements



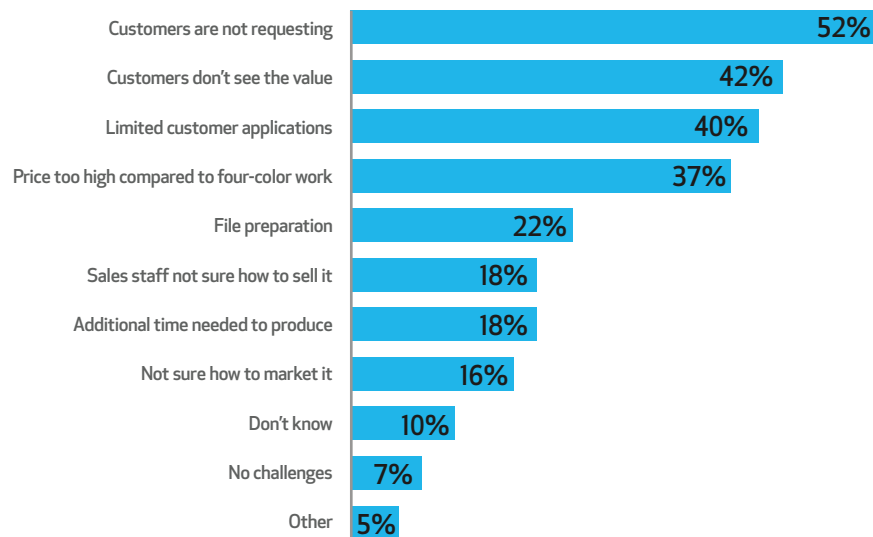
Q. Does your operation plan to offer any of the following special effects and/or technique?

Source: Digital Printing 5.0 NAPCO Research 2019

Low Customer Demand for Enhanced Print a Key Adoption Obstacle

The challenges respondents report in offering expanded digital printing capabilities (Figure 7) center on customer demand and lack of understanding. (There was little difference on reported challenges among all respondents and those reporting double-digit sales growth.) The top two sales challenges are that customers aren't requesting print embellishments nor are they seeing the value of them. Like any new product or service, customers need to be educated on its existence and value proposition. Other respondents report pricing and the inability of their sales reps to sell its added value.

Figure 7
Commercial Printer
Challenges in
Offering Expanded
Capabilities



Q. If you offer expanded printing capabilities, what challenges do you have in growing adoption or utilization?
N = 175 Commercial Printers

Source: Digital Printing 5.0 NAPCO Research 2019

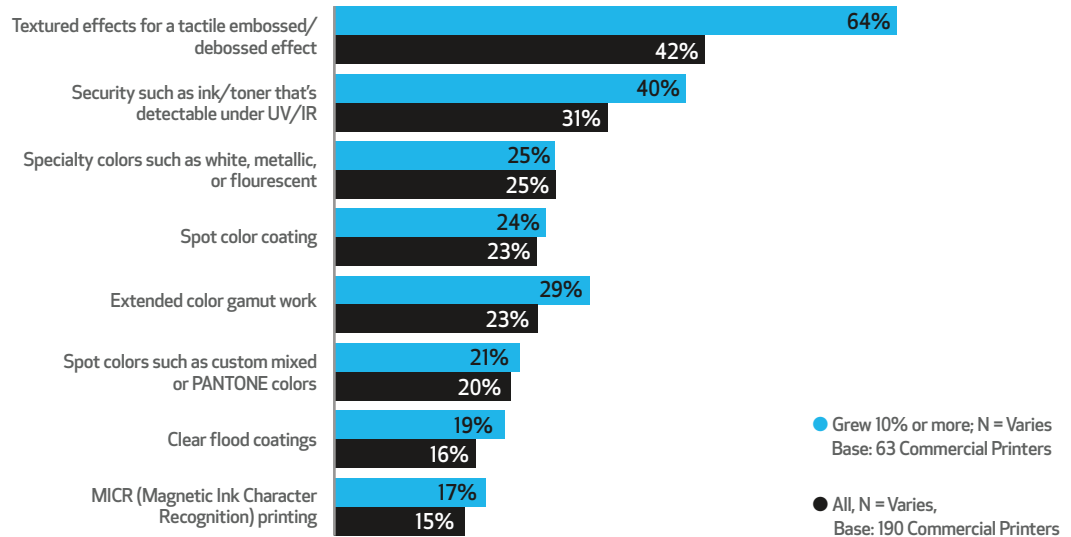
Overcoming sales challenges requires making investments in business development, including customer education and sales training. Print providers need to educate the design community, agencies, creatives, marketing managers, brand owners, and print specifiers about the possibilities of digital enhancements. Sales reps need to be trained on what's possible so they, in turn, can educate customers and prospects.

Given that visual appeal of enhancements, producing print samples offers a first-hand experience to prospects.

Premiums Commercial Printers Charge for Print Enhancements

An interesting research finding is that commercial printer respondents reporting double-digit sales growth charge higher premiums for print enhancements (Figure 8). Commercial printers report charging the most for textured effects for tactile embossed/debossed effects, with respondents offering these services saying they can get, on average, a 42% price premium. Firms reporting double-digit sales growth, however, are commanding a 64% premium.

Figure 8
Premiums
Commercial Printers
Charge for Print
Enhancements



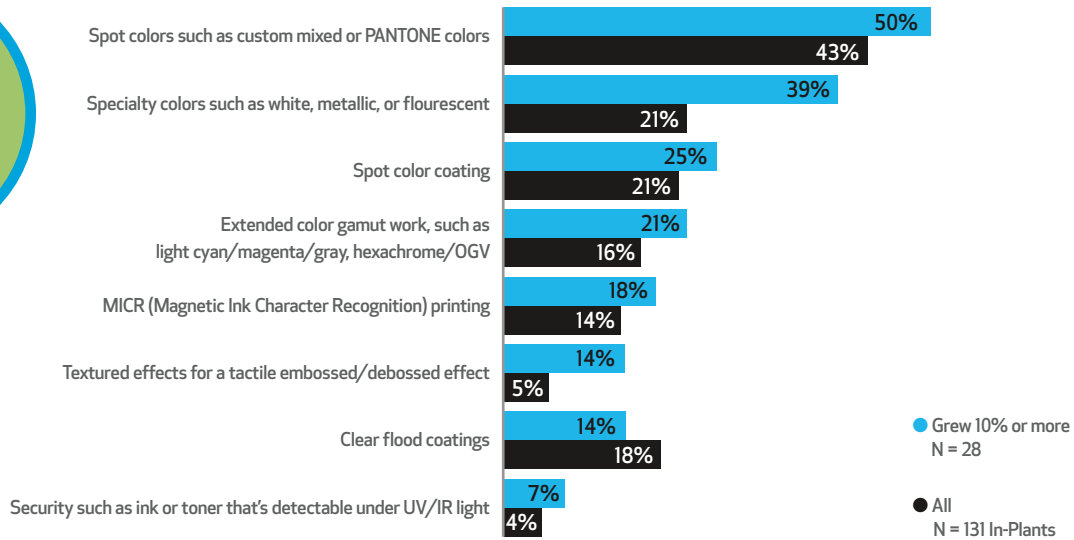
Q. Compared with digital CMYK-only printing, how much of a premium or percentage increase can you charge for a print enhancement beyond standard four-color?

Source: Digital Printing 5.0 NAPCO Research 2019

High-Growth In-Plants Offer Enhanced Print

High-growth in-plant respondents also report greater use of special effects on their digitally printed output. Overall, in-plants report the top special effects or techniques as spot colors, specialty colors, and spot coatings (Figure 9). One factor that could be influencing the higher reported use of specialty colors and extended color sets is due to the fact that more than half of in-plant respondents indicate they operate digital wide-format devices.

Figure 9
High-Growth In-Plants Offer Special Effects/Techniques

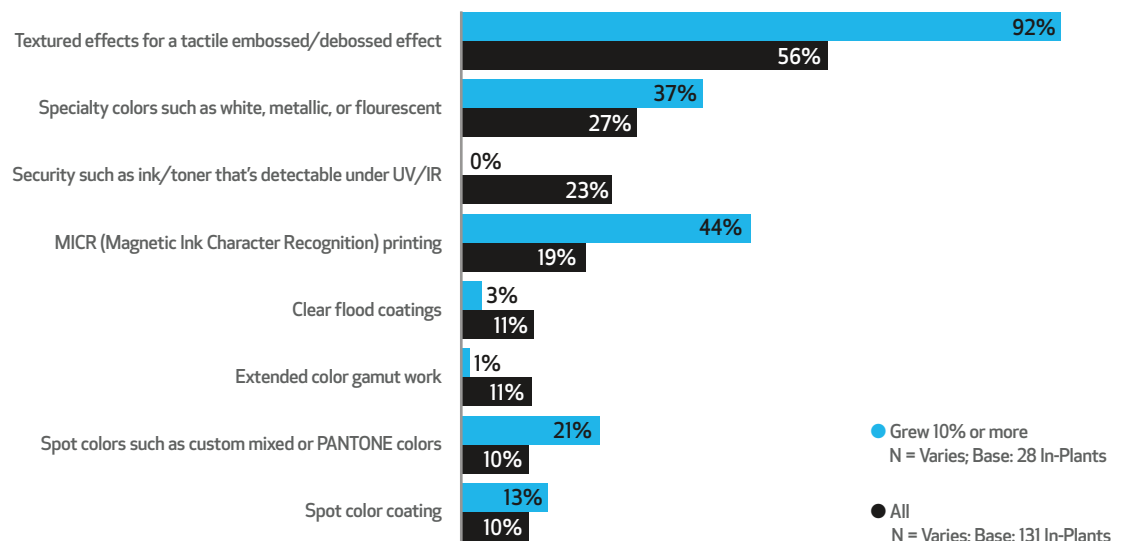


Q. Does your operation offer any of the following special effects and/or techniques on your digitally printed output?

Source: Digital Printing 5.0 NAPCO Research 2019

While the top special effects in-plant respondents report offering on their digitally printed output center on spot and specialty colors, the enhancement they're charging the highest premium for is textured/tactile effects (Figure 10).

Figure 10
Premiums In-Plants Charge for Print Enhancement

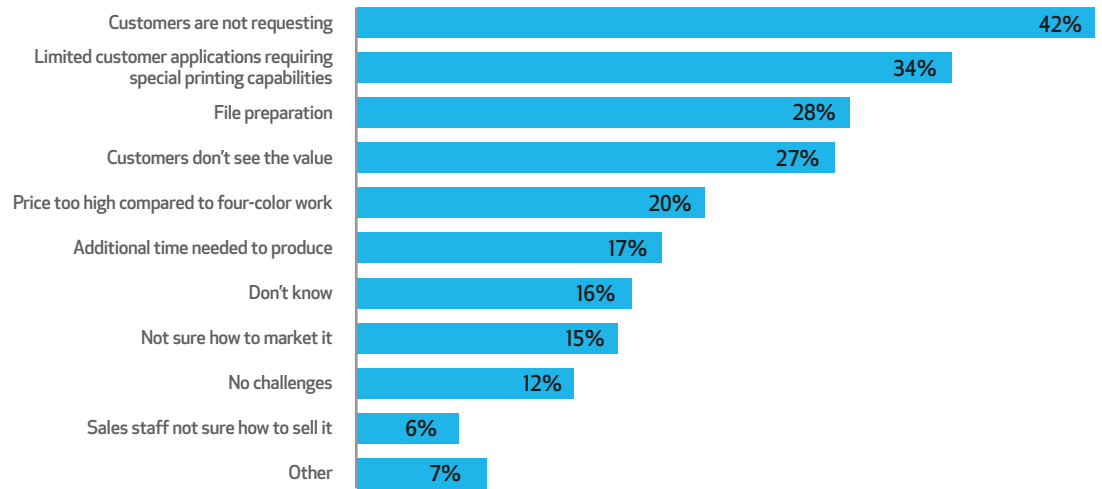


Q. Compared with digital CMYK-only printing, how much of a premium or percentage increase can you charge for print enhancement beyond standard four-color?

Source: Digital Printing 5.0 NAPCO Research 2019

Key challenges for in-plants in offering enhanced printing are similar to commercial printer respondents. In-plants note a lack of demand from customers and limited customer applications requiring these capabilities as being their top challenges (Figure 11).

Figure 11
In-Plant
Challenges in
Growing Expanded
Digital Printing
Offerings



Q. If you offer special expanded printing capabilities, what challenges do you have in growing adoption or utilization?
N = 122 In-Plants

Source: Digital Printing 5.0 NAPCO Research 2019

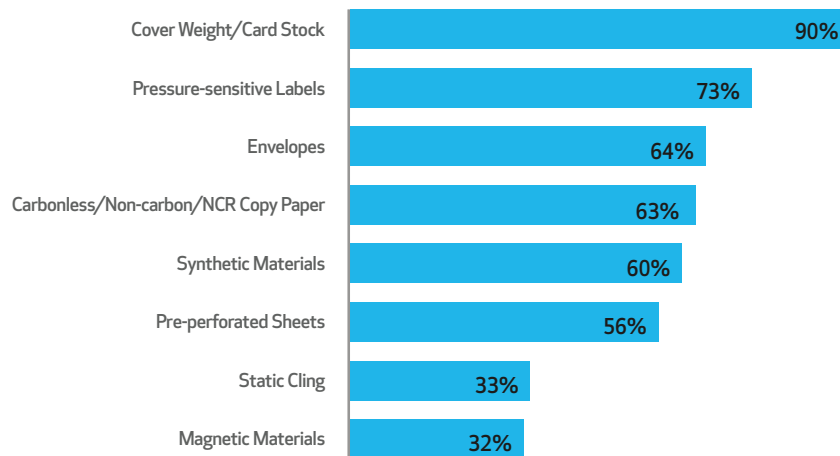
Offering a Wider Variety of Substrates

The ability to print on a wider range of substrates is also enhancing and expanding digital printing applications. Today's digital print devices are capable of supporting an increasing array of substrates, including heavier stocks and synthetic materials. This brings great flexibility in terms of the types of jobs they can produce.

Digital presses can print on new, high-value substrates that include rugged synthetics; pressure-sensitive stocks; pre-scored, ready-to-print dimensional stock; and photo media, among others. Printing on specialty media creates new opportunities to offer unique solutions that meet customer needs, especially when combined with special effects. This can enable commercial printers to capture more high-margin work, retain current clientele, and grow their client bases.

Nearly all survey respondents report printing cover weight/card stock on their digital presses. Likewise, nearly three-quarters report printing on pressure-sensitive label stocks. Interestingly, there was little difference in the types of substrates commercial printers reporting double-digit sales ran on their digital printing devices as compared to respondents overall (Figure 12).

Figure 12
Special
Substrates Used
on Digital Printing
Devices

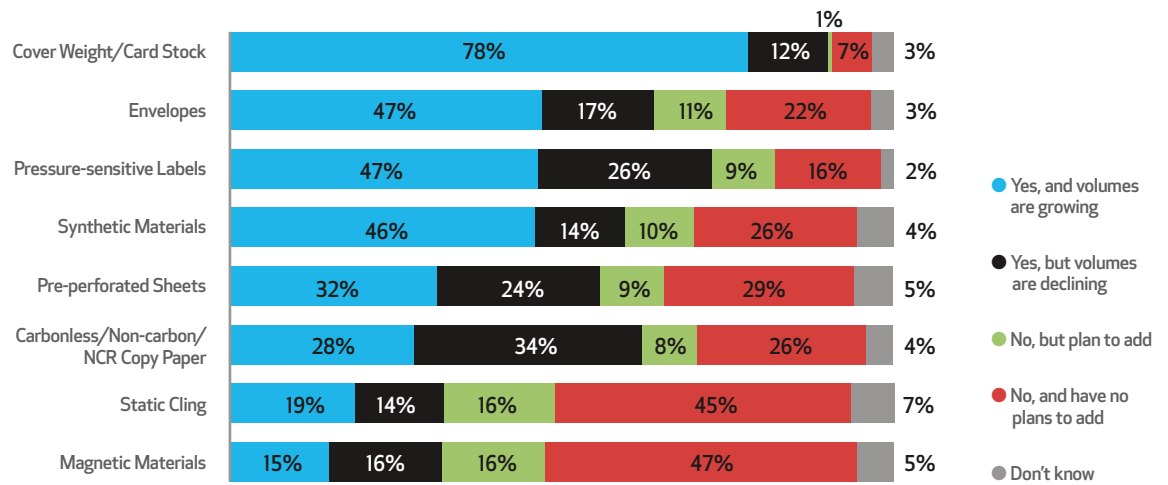


Q. Do you print any of the following special substrates on your digital printing devices?
N = 184 Commercial Printers

Source: Digital Printing 5.0 NAPCO Research 2019

A different view of the responses to the question about special substrates run on digital presses shows that a large majority of commercial printers are increasing their use of cover weight/card stocks, with 78% saying they're printing on these substrates and increasing their use of them (Figure 13), followed by envelopes, pressure-sensitive labels, and synthetic materials.

Figure 13
Special Substrates Commercial Printers Run on Digital Presses



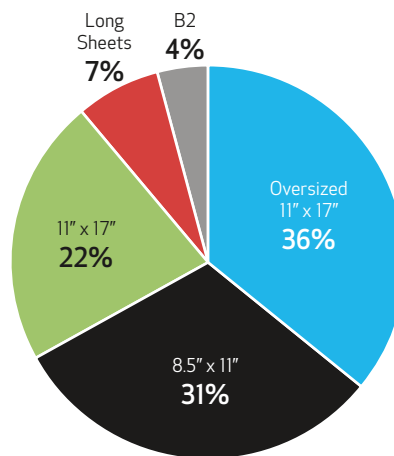
Q. Do you print any of the following special substrates on your digital printing devices?
N = 184 Commercial Printers

Source: Digital Printing 5.0 NAPCO Research 2019

The substrates most likely to be used — yet are on the decline — include carbonless/non-carbon/NCR copy paper, pressure-sensitive labels, and pre-perforated sheets.

The majority of commercial printer respondents are printing on oversized 11" x 17" sheets, followed by 8.5" x 11" and 11" x 17" formats. Commercial printing respondents report that 7% of the media run on their digital presses is long-sheet format (Figure 14).

Figure 14
Commercial Printers — Media Sizes Run on Digital Presses

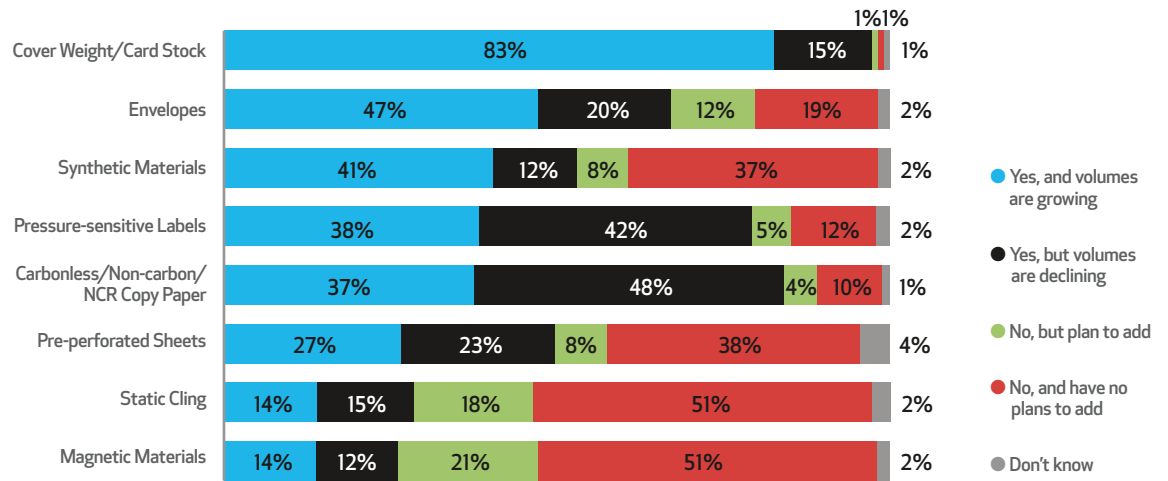


Q. What is the breakdown of the media sizes run on your digital presses?
N = 182 Commercial Printers

Source: Digital Printing 5.0 NAPCO Research 2019

As for in-plant survey respondents, nearly all report using cover weight/card stocks (98%), followed by carbonless/noncarbon/MCR copy paper and pressure-sensitive labels on their digital presses (Figure 15). More than half of in-plants are printing envelopes, synthetic materials, and pre-perforated sheets. In-plant respondents also report declines in their use of carbonless/non-carbon/NCR copy, pressure-sensitive materials, and pre-perforated sheets. In addition, more than half are not using static cling or magnetic materials and indicate no plans to add them.

Figure 15
Special Substrates
In-Plants
Run on Digital
Printing Devices

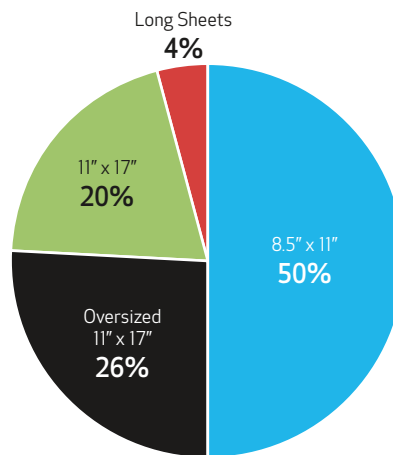


Q. Do you print any of the following special substrates on your digital printing devices?
N = 123 In-Plants

Source: Digital Printing 5.0 NAPCO Research 2019

The most common media size in-plant respondents run on their digital presses is 8.5" x 11", with half of in-plant respondents using this size (Figure 16). The remainder is almost evenly split between 11" x 17" and oversized 11" x 17" sheets.

Figure 16
In-Plants —
Media Sizes
Run On
Digital Presses



Q. What is the breakdown of the media sizes run on your digital presses?
N = 121 In-Plants

Source: Digital Printing 5.0 NAPCO Research 2019

Conclusion

Print enhancements and embellishments, along with special media and substrates, play a critical role in enhancing the value of print and differentiating print providers from the competition. When seemingly every direct mail postcard, product brochure, or marketing presentation is in four-color, those produced on heavier stocks or with specialty colors or that incorporate special or tactile finishes get picked up and read first and are remembered long afterwards.

Today's digital printing and finishing solutions offer a wide variety of print enhancements that may offer print providers new, higher-margin opportunities to better serve their customers, create new product applications, and stand out from their competitors. Before investing in these solutions, print providers need to evaluate the opportunity within their customer base, given some of the challenges cited.

About Digital Printing 5.0

Digital Printing 5.0 is a series of thought-leadership content pieces based on a NAPCO Research survey of commercial and in-house printing that was sponsored by Canon.

1. Digital Printing: Where Are We Now?
2. Beyond the Press: Defining the Infrastructure for Operational Success
3. Optimizing Color Across Print Platforms
4. The Rise of the Digital Enhancement Opportunity
5. Best Practices For Digital Finishing

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