Colour Beyond Limits

Redefining Print with Colour Embellishment Technology

WHITE PAPER

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INTRODUCTION

This white paper explores the evolving landscape of colour embellishment technologies within the printing industry—highlighting key market trends, technical capabilities, and strategic applications that drive business value. For the purposes of this paper, an "embellishment" is a decorative detail or feature added to printed materials to make them more attractive. This definition spans classic high-impact finishes (e.g., metallic foiling, clear varnish, raised textures, and white) as well as gamut-extending specialty colours, such as fluorescent pink, that enlarge the printable colour space.

Drawing on web-based surveys and in-depth interviews with printing professionals across Europe, this paper reveals what type of embellishments print service providers (PSPs) are promoting and selling to whom and why. Research respondents also shared their main challenges and opportunities. We will also focus on which strategies can help PSPs sell the value of embellishments, assisting them in differentiating their offerings and standing out in competitive markets.

KEY FINDINGS

♦ The most common types of embellishments are metallics, foils, clear varnish, white, raised textures, and fluorescents. Fluorescent colours—such as pink—can also expand the colour gamut.

♦ Embellishments are primarily used in commercial, packaging, and consumer applications.

♦ Digital printing colour embellishments provide PSPs with great value and opportunity to differentiate their services as well as drive revenue and profit growth.

♦ The value of embellishments is closely tied to core communication and marketing objectives, including capturing attention, elevating brand value perceptions, and encouraging word of mouth.

♦ The main challenge lies in the price premium associated with embellishments and, therefore, how to sell the value.

♦ PSPs need to promote and sell embellishments within the context of the customer's marketing objectives, helping print buyers to clearly visualize the potential ROI.

ANALYSIS

This white paper draws on insights from a focused survey of European PSPs, conducted in early 2025. Respondents represented a mix of business types, including digital print specialists, general commercial printers, and corporate or government in-plant operations. Most participants came from smaller to mid-sized firms, with the majority operating with fewer than 100 employees. While the sample size is relatively modest, it provides a meaningful snapshot of embellishment use and awareness among PSPs actively engaged in high-quality print production.

Figure 1: Survey Respondent Types

Corporate or government In-Plant Print operation
14%

General commercial printer
36%

Digital print specialist (primarily digital printing services)
50%
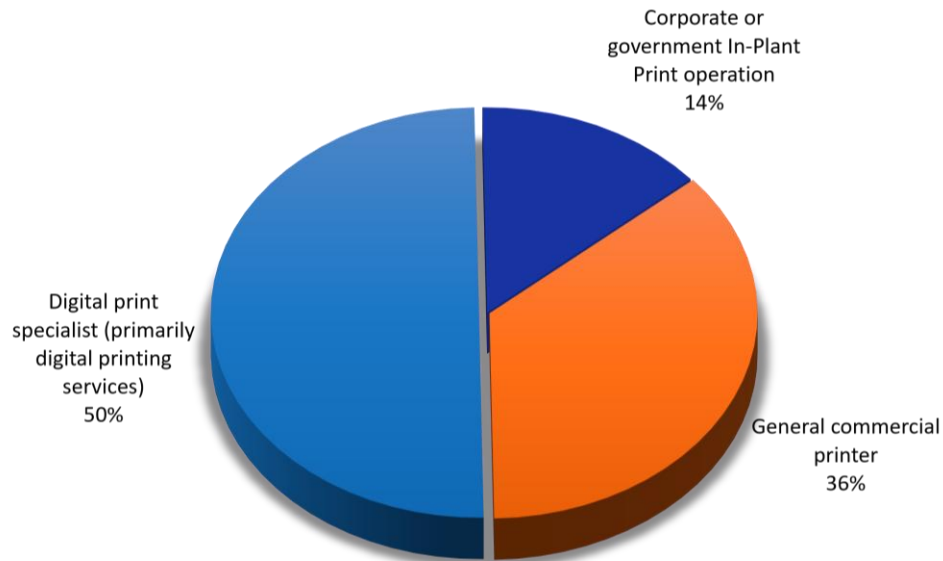
N = 22
Source: Colour Embellishments in Print Survey 2025

Types of Colour Embellishments

PSPs offer a range of colour embellishment options to enhance the impact of printed materials:

♦ Metallic finishes, mainly silver and gold foiling, are available through traditional and digital methods using toner adhesion. These create reflective surfaces that catch the light and attract attention, making them particularly effective for premium applications.

♦ Raised textures created by 3D varnish effects on printed surfaces add a tactile dimension to print, with some applications extending to accessibility.

    o For example, tactile elements can support visually impaired readers.

◆ White ink or toner serves two purposes: As an underlay to create vibrant colours on coloured substrates or for direct printing on specialty stocks. This capability exists across digital and large format equipment.

◆ Specialty coatings, including clear varnish for spot highlights, add subtle dimension to printed pieces. These coatings can also provide practical benefits, such as protecting print surfaces in applications like direct mail.

◆ Fluorescent or neon colours extend the standard colour gamut, allowing for the reproduction of select spot colours and offer standout effects.

  o The Figure below demonstrates the impact of adding pink to a standard CMYK build. The panel on the left (CMYK + Pink) shows markedly richer saturation and livelier floral hues, while the right-hand panel (CMYK only) appears comparatively muted.

Figure 2: Left: CMYK + Pink; Right: CMYK only

Note: Sample designer is Emelie Dahlbacka of Multidesign Sweden

Metallic gold and silver were the most popular embellishments sold, cited by nearly half of respondents, followed by white ink and spot colours. The data highlights a strong preference for classic, high-impact finishes—though there is also clear interest in options like clear varnish and fluorescents, including pink, which can expand the colour space. Although it was selected by one out of five respondents, the addition of pink broadens the printable colour gamut, which offers great opportunities to marketers to enhance their promotional materials.

Figure 3: Most Commonly Sold Embellishments
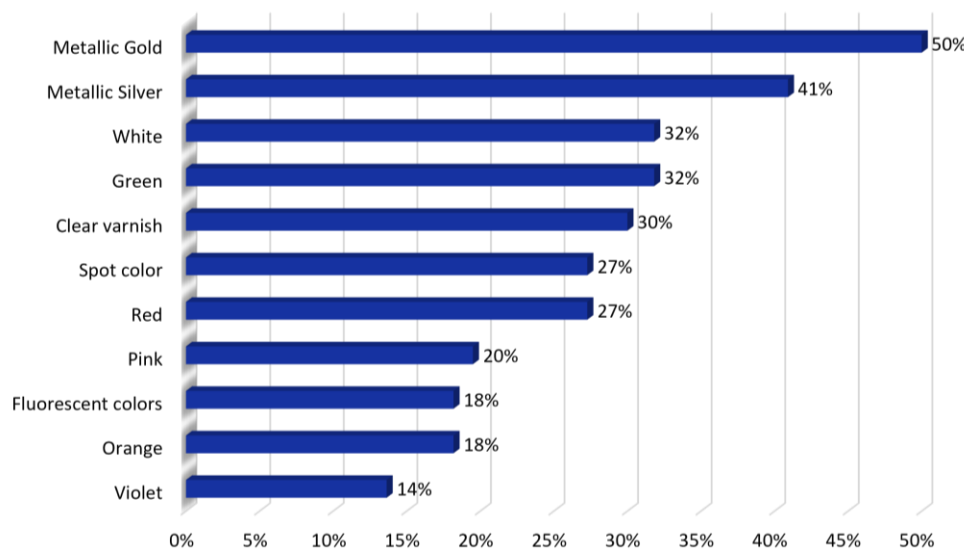
N = 28 (including interview respondents)
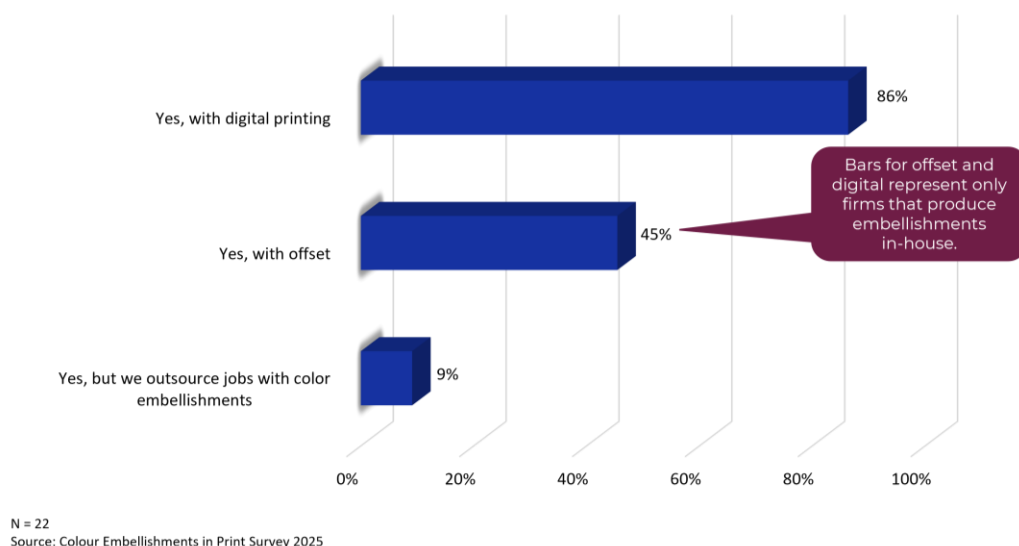Source: Colour Embellishments in Print IDIs and Survey 2025

Output Technologies and Workflow

Most survey respondents reported that they manage embellishments fully in-house, suggesting a strong preference for maintaining control over quality, turnaround times, and workflow integration. Just under 91% handle embellishments partially in-house, while very few outsource embellishment work entirely.

Digital printing dominated among survey respondents, though traditional methods remain relevant for specific applications. Some varnish presses handle foil, gold, and texture applications in workflows where printing first occurs on other CMYK toner devices before lamination and embellishment. Six-colour toner devices appear frequently in market usage for producing metallics, white, clear, as well as fluorescent pink effects, which extends the achievable colour gamut. For extended gamut applications, specialized software such as Touch Seven—a colour separation tool designed for extended gamut printing—is used to isolate specific areas for colour enhancement.

Digital printing embellishment technologies are preferred for shorter runs due to their cost-effectiveness, elimination of die costs, and suitability for multi-stockkeeping unit (SKU) work.

Figure 4: Approach to Colour Embellishments

Bars for offset and digital represent only firms that produce embellishments in-house.

- Yes, with digital printing — 86%
- Yes, with offset — 45%
- Yes, but we outsource jobs with color embellishments — 9%

N = 22
Source: Colour Embellishments in Print Survey 2025

Workflow complexity for embellishments varies in sophistication and automation based on equipment capabilities and applications. While digital printing processes dominate, implementation approaches differ widely.

For foiling applications, some laminator technologies represent a complex, less productive (but cost-effective) workflow used by several companies. This involves printing a base design in CMYK, applying soft-touch cold lamination, overprinting with black toner in specific areas, and then running through the laminator again with foil that adheres only to the black toner areas. While time-consuming and multi-step, this process can produce premium effects at a lower cost than dedicated, specialized systems.

Customer-facing automation also varies significantly from basic manual processes to fully digital systems, which allow users to upload text and photos through online shops, select box styles, and track production via quick response (QR) codes. More commonly, companies use consultative approaches with prototype creation before proceeding to full production.

Value, Challenges, and Opportunities

Colour embellishments enable PSPs to offer a higher quality printed product, helping them to differentiate themselves—especially when competing on price against larger companies that run economy of scale models. Investments in embellishment technologies allow PSPs to attract creative sector clients as well as having strategic conversations with marketers outside of procurement. These premium specialty offerings also support and build long-term customer loyalty against competition.

The market shows consistent demand for premium short-run products in business-to-business (B2B) and business-to-consumer (B2C) environments, where traditional embellishment methods would be too expensive. Many companies report that while embellishments typically account for a small portion of their total print volume, these services generate significantly higher margins and foster strategic customer relationships. Moreover, visually striking embellishments can stimulate positive word-of-mouth—extending brand reach organically and bolstering return on investment.

Figure 5: Change in Sales of Embellishments Over the Past Two Years

N = 22
Source: Colour Embellishments in Print Survey 2025

"One of the biggest challenges we face, especially with the traditional hot foil is the sustainability angle, the environmental credentials... people want to be able to recycle their packaging. We have it a lot with the labels here. Where they want the actual end physical product to be completely biodegradable."
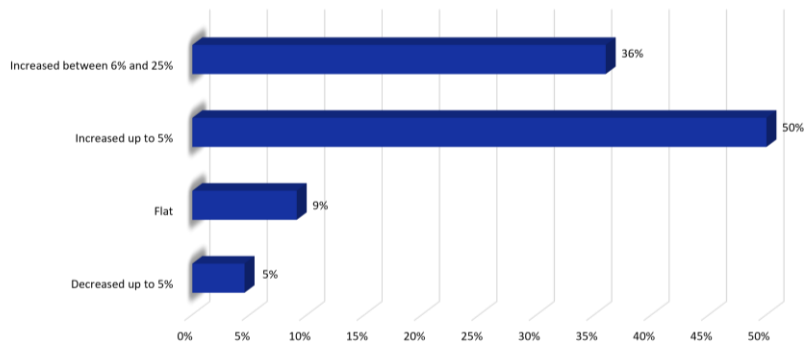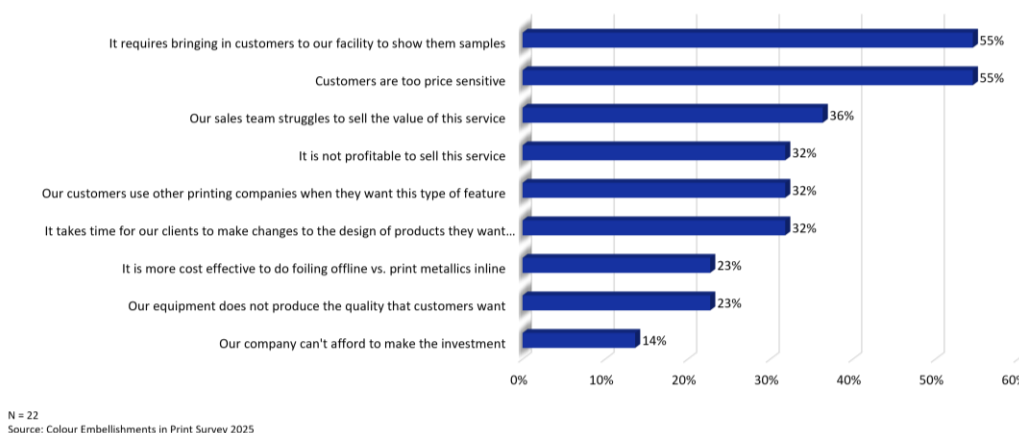
– Co-owner of a commercial printing business in the UK

Despite these benefits, several challenges remain. The most significant is the price premium, driven by additional supply costs—embellishments require an additional toner type—and, in some cases, higher pre-press and production costs. Technical challenges potentially include complex workflows, registration issues with white base printing, and digital printing equipment limitations for high-volume production. Managing customer expectations can be difficult as some print buyers expect digital printing metallics to match traditional foil or digital clear effects to perfectly replicate conventional spot-UV effects.

"I think the biggest challenge is for customers to justify the additional cost. I think that's always going to be the biggest thing.

– Business development professional working at a packaging printing company in the UK

Sustainability concerns might also impact adoption. As clients increasingly prioritize environmental responsibility, questions are being raised about the recyclability of embellished materials, especially those involving foils and laminates.
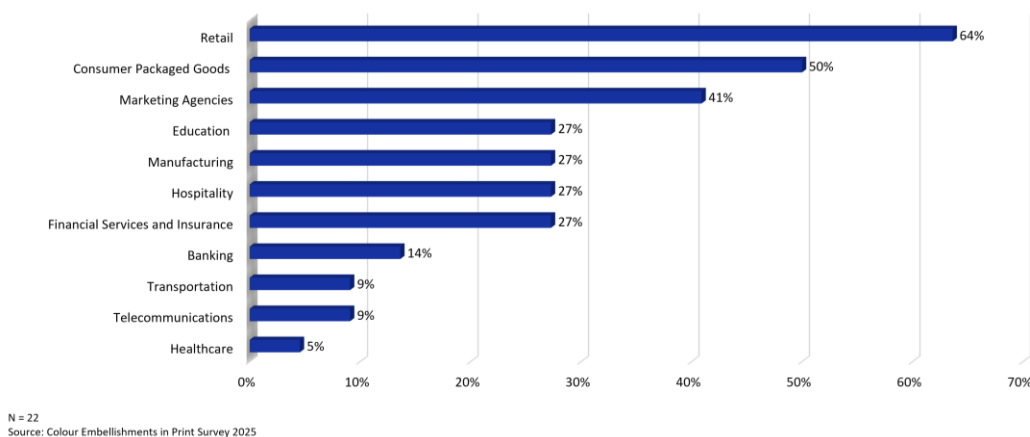
Figure 6: Top Challenges When Selling Embellishments

It requires bringing in customers to our facility to show them samples — 55%
Customers are too price sensitive — 55%
Our sales team struggles to sell the value of this service — 36%
It is not profitable to sell this service — 32%
Our customers use other printing companies when they want this type of feature — 32%
It takes time for our clients to make changes to the design of products they want… — 32%
It is more cost effective to do foiling offline vs. print metallics inline — 23%
Our equipment does not produce the quality that customers want — 23%
Our company can't afford to make the investment — 14%

N = 22
Source: Colour Embellishments in Print Survey 2025

Top Vertical Markets and Print Buyers

Enhancing brand visibility and brand recognition (leading to better customer engagement) are key goals for print buyers and marketeers, which is why vertical markets such as retail, marketing agencies, and consumer goods packaging are all investing in colour embellishments to varying degrees.

Figure 7: Vertical Market Interest

Retail — 64%
Consumer Packaged Goods — 50%
Marketing Agencies — 41%
Education — 27%
Manufacturing — 27%
Hospitality — 27%
Financial Services and Insurance — 27%
Banking — 14%
Transportation — 9%
Telecommunications — 9%
Healthcare — 5%

N = 22
Source: Colour Embellishments in Print Survey 2025

The special interplay between fluorescent pink and magenta in the CMYK printing process helps enhance and deliver smoother skin tone quality as well as provide a brighter, punchier look to the overall finished product. This effect is impactful in the cosmetics and beauty industries. The premium nature of cosmetic products aligns well with the enhanced visual appeal that embellishments provide. Pink also drives richer, more vibrant violets that can play well in fashion marketing communications. Most importantly, the addition of pink allows PSPs to match certain colours that lie outside the standard CMYK spectrum.

Premium beverage brands, including spirits and other specialty drinks, form another significant market segment. These brands frequently invest in embellished packaging, menus, and promotional materials to support distinctive, high-impact brand experiences.

Corporate clients—especially B2B firms with 200+ employees—represent another important market segment. These are consistent buyers of branded materials such as welcome boxes and corporate gifting programs. Creative agencies also serve as key customers for some printers, often starting with embellished materials for their own marketing before extending to client projects.

Publishing is another standout vertical, with detailed examples of book covers (especially for children's titles) incorporating multiple embellishment techniques to add tactile and visual appeal. Retail is mentioned specifically for using embellishments on gift vouchers, certificates, and scratch-off promotions for customer loyalty programs.

Other specialized segments include wedding and communion markets, jewellery sectors, vape products, smaller local businesses seeking fast turnaround, print managers and brokers servicing various end clients, as well as specialty food producers (like chocolatiers) in need of premium packaging. In most cases, the key objectives are capturing attention and premium brand positioning.

Popular Applications

Survey data shows that packaging consistently emerges as the premier application for embellishments across respondents. These products are ideal because they are often the first point of contact between a brand and its audience. Folding cartons for premium products (e.g., beauty and cosmetics and vape products), custom gift packaging (e.g., welcome boxes, baby gift boxes, wine boxes), and specialty items with craft materials requiring white printing dominate this category. The packaging sector's prominence reflects embellishments' ability to create shelf impact and premium brand perception. When it comes to labels, luxury beverages and spirits are also popular for embellishments.

Business cards and invitations form another significant category, with metallics and white printing on coloured stocks creating premium effects. One company specifically cites this as their top application, noting the effectiveness of metallic and white toner for creating standout business credentials.

Print collateral, including brochures, catalogues, and promotional materials represents another major application area. Several companies mention these items, noting the effective use of metallics and fluorescent pink for impact in marketing materials and sales literature; many PSPs further complement these effects with finishing processes like digital die cutting, laser cutting, and duplexing.

Book covers, especially for children's books, constitute a specialized application, as highlighted by one respondent who detailed multilayered embellishment approaches by combining neon pink, soft-touch lamination, and metallic foils. Gift vouchers and certificates for retail use are mentioned as a growing segment in this category.

Figure 8: Top Selling Applications with Embellishments
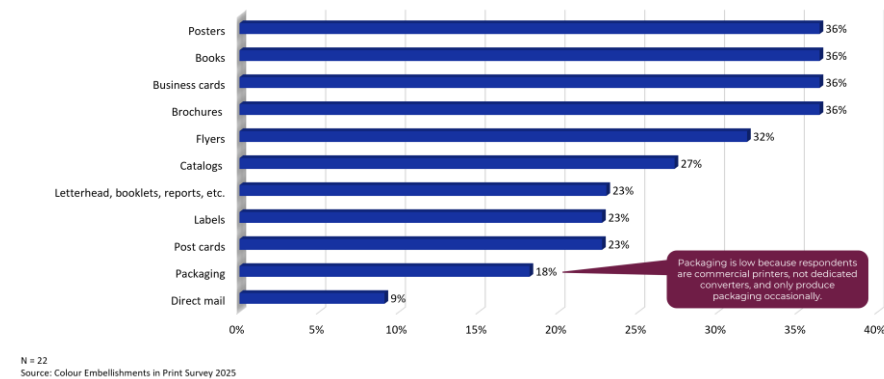
N = 22
Source: Colour Embellishments in Print Survey 2025

Future Outlook

The outlook for colour embellishment technologies remains consistently positive, with most PSPs anticipating continued growth in this segment. While projected growth rates vary among respondents, the consensus points to steady expansion driven by a combination of technical innovation and evolving market demand.

Many PSPs predict annual growth in the 5%-20% range for embellishment volumes. Although this is a strong indicator of market momentum, some expect growth to moderate slightly as markets mature and initial adoption curves flatten. One PSP reported organic growth of 5%-10% annually through word-of-mouth referrals alone despite minimal proactive marketing, highlighting the potential for natural expansion as awareness spreads.

Technical advancements are also expected to fuel further growth, especially in packaging applications. Equipment capable of handling heavier substrates (up to 800 microns) is unlocking new opportunities for premium packaging projects.

Extended gamut applications using specialty colours continue to show promise. Several respondents identified white printing as maintaining strong momentum based on current trends. Many PSPs also expect uptake to rise as additional specialty colours become more widely supported in digital printing systems.

A noteworthy strategic shift appears to be the repositioning of embellishments in the market. Rather than treating them exclusively as premium add-ons, some PSPs are moving towards integrating embellishments as standard elements of their core offerings. This approach may help drive broader adoption across new market segments and applications.

Sustainability, as noted elsewhere in this paper, may present challenges and opportunities as the market evolves. PSPs that can effectively address recyclability concerns while still delivering premium visual and tactile effects stand to gain competitive advantage in environmentally conscious market segments.

With these future trends in mind, it is crucial for PSPs to examine the opportunities and strategies that can help them maximize the potential of colour embellishments in today's market.

Business Opportunities and Selling Strategies

The Value and Where it Fits

Embellishments offer PSPs the ability to sell a high-quality printed product that helps marketers and communicators stand out and be more effective. On the other hand, it is also clear that the primary challenge lies in the price premium often associated with embellishments (see Figure 6).

To succeed, it is imperative to understand how embellishments fit into a print buyer's overall communication or marketing strategy, and how to position and sell them effectively. Embellishments aren't just decorative—they are a critical part of a communication tactic to drive engagement. While embellishments undoubtedly enhance the visual appeal of print, that is not the reason why print buyers are purchasing them. This may explain some of the challenges PSPs face when trying to sell a product that comes with a price premium over traditional offerings.

In the real-world practice of communication, embellishments are not simply about making print "prettier" for the sake of it. Instead, they have everything to do with functionality; print buyers and marketers purchase embellishments because they are looking to improve ROI by using them more thoughtfully and strategically within their communication campaigns.

To succeed, any communication—whether print or digital—must achieve the following objectives:

- Capture attention
- Enhance the perceived value of the brand that is communicating with their target
- Deliver relevant and informative content
- Make it easy for the target audience to take the desired action

Embellishments play a strong role in the first two of these objectives. PSPs, therefore, need to frame their sales pitches and sample presentations around these points. By doing so, print buyers (who already expect that such higher-quality products will carry a premium price) can clearly visualize the functional role embellishments play in achieving campaign objectives and improving potential ROI.

Figure 9: Main Reasons PSPs Offer Embellishments to Customers

N = 22
Source: Colour Embellishments in Print Survey 2025
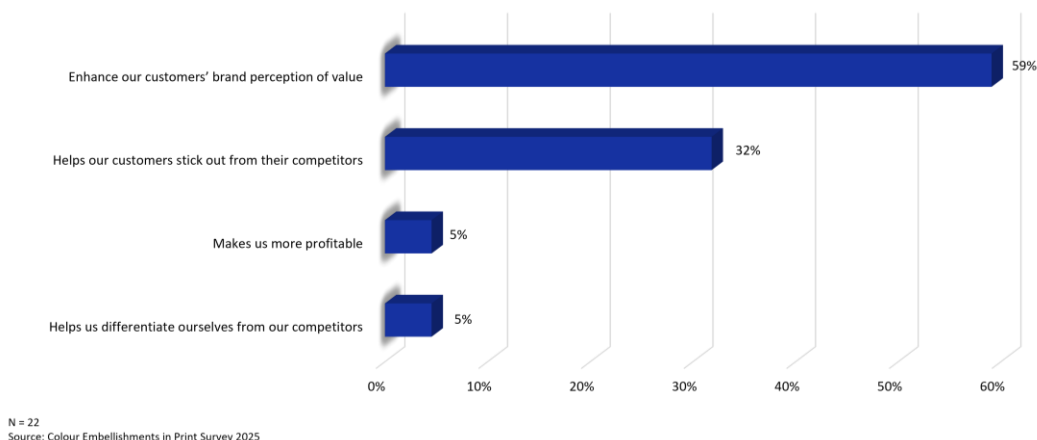
Another key objective brands and communicators strive for is expanding their reach to a wider audience of potential customers. Embellishments can bring great value here as well by activating the most holistic and effective communication channels of all: word of mouth.

When someone receives high-quality, embellished printed materials, they are often inspired to share them with colleagues, friends, and family. This extends the lifespan of the printed communications—increasing brand exposure and sales opportunities for the sender. In addition, people tend to feel reluctant to simply throw such well-produced materials away, often keeping them for longer and giving the brand repeatable visibility.

Word of mouth is highly effective because it is unbiased and personalized, coming from individuals who have a trusted relationship with those they share the materials with. This trust-based interaction is priceless, driving additional sales in ways that conventional advertising cannot match.

The same principles apply in packaging applications. Embellishments can capture attention, elevate perceived brand value, and even spark word-of-mouth interest. But beyond the visual impact, packaging also plays a vital functional role in protecting and transporting the product inside. Packaging with embellishments produced with digital printing equipment is increasingly used for prototypes, product launches, and product testing.

In commercial print *and* packaging, embellishments can be paired with customization and segmentation strategies to further increase the value and relevance of the communication.

Sales Approach and Tools

Selling the value of embellishments has been a challenge for PSPs (as seen in Figure 6). PSPs often rely on printed embellishment samples to demonstrate the value of the products that they can produce to their customers. While these samples can be incredibly persuasive, the timing and sequence in which they are presented to the print buyer is critical.

For the most part, PSPs show the samples first then ask for the print buyer's opinion. The print buyer is usually impressed, seeing a visually impactful and high-quality product; there's often nothing not to like. However, this approach tends to create an immediate association with a higher price. And while selling a product at a higher price isn't inherently a problem, the issue lies with a missing link: the connection between the higher price and the potential return on investment.

A higher priced product does not necessarily mean such a product is more expensive. If a premium product delivers a stronger ROI, it can ultimately be more cost effective than a lower-priced alternative that offers a lower ROI. To sell the value and, therefore, justify the price premium of embellishments, we must frame the conversation around the buyer's communication or marketing objectives before showing any samples.

Start by asking the print buyer, communicator, or marketer whether one of their main campaign objectives is to capture attention and whether such an objective is hard to achieve in a saturated, competitive market. Once they confirm this challenge, introduce the idea that embellishments can help meet such objective. Then connect the dots to the next objective: enhancing the perceived value of their brand and products so more prospects would like to buy from them. When used effectively, embellishments can elevate the tactile and visual quality of the marketing piece, reinforcing brand trust and signalling quality to the buyer.

Only after establishing this context should samples then be presented. This sequencing helps the print buyer (or marketer) to visualize the potential ROI through the purchase of a marketing product that may come at a premium, but offers the opportunity to drive engagement, boost sales, and increase brand revenue.

Another common mistake (or risk) when selling embellishments is to imply that they are so powerful and can be a universal solution to fit every campaign or target audience. This is simply not true. Like any high-quality product, embellishments need to be positioned and sold in a personalized and strategic way.

PSPs should encourage and guide marketers and communicators to think about which campaign—and which segments of their target audience—would benefit most from embellishments. Even within a single campaign, it may make sense that only a subset of the target audience should receive a communication enhanced with embellishments. This can be based on the brand's varying interests across different recipient segments, as well as the distinct communication challenges associated with each audience group within the campaign.

It is essential to engage directly with individuals in sales and marketing roles—those in positions of responsibility who understand the value and potential ROI and can look beyond just printing price.

Where possible, price should not be based on a simple "cost plus fixed percentage uplift" model. Instead, pricing for an embellished product should reflect how much support and value PSPs provide to their customers. If a PSP helps a client create a marketing product that generates a strong ROI, they deserve to charge accordingly. Value-based pricing is fair and strategic.

A good practice for PSPs is to develop personalized prototypes or samples for print buyers and marketers. These would allow clients to see and feel the value as well as impact of the embellishments linked to their communication campaigns. In doing so, however, it is also important to assign a nominal cost for these samples to not devalue the embellishment product. This should only be done *after* the customer sees the value of the embellishment and is considering making the investment. Of course, if the client proceeds with the order, PSPs can always discount that sample investment charge from the final invoice.

Another effective approach is to take past print jobs that were created without embellishments and recreate them using embellishment effects. This comparison would help communicators and marketers to clearly visualize the difference in impact.

Case Studies

Several projects demonstrate the technical capabilities and creative applications of embellishment technologies among the providers we spoke with...

Tactile Cards for the Visually Impaired
One company created custom-shaped cards with raised textures designed specifically for visually impaired users, showing how embellishments can serve accessibility needs while maintaining visual appeal.

San Pellegrino Can Art Piece
A standout creative project involved an art piece featuring a crushed San Pellegrino can printed on metallic substrate. The substrate's silver base recreated the can's metallic appearance, while four-colour process printing and polymer embellishment created a raised effect simulating liquid spilling from the crushed can.

Gold Whiskey Packaging
Premium packaging applications include whiskey bottle packages with textured, rippled gold effects rather than flat gold, creating a more sophisticated appearance. One PSP highlighted craft paper outer postal sleeves requiring a double-hit white toner application for sufficient opacity, solving a technical challenge while achieving a premium look.

Cosmetics Branding

Creative colour applications were demonstrated by using fluorescent pink to enhance skin tones for cosmetics, create bright violets for fashion, and expand the colour gamut for corporate branding—especially European orange brand colours. Another technique involved printing a silver layer before CMYK to make jewellery products stand out in catalogues.

AR-Enhanced Wine Labels

Augmented reality (AR) is increasingly being paired with embellishments to create powerful consumer engagement. Wine labels like Australian brand 19 Crimes and Walking Dead-themed wines demonstrate how embellishments can combine physical print with electronic experiences for an engaging multimedia print experience.

The 19 Crimes wine labels display historical figures who were convicted of crimes that led to their deportation to Australia in the 1700s. These premium labels (enhanced with gold-foil embellishments) feature QR codes that consumers can scan with their smartphones after downloading the companion app. When viewed through the app, the static embellished images on the labels become animated with the historical figures "coming to life" to tell their personal stories about life in colonial Australia.

Figure 10: AR-Enhanced Wine Labels Enable Consumers to Scan QR Codes

Source: 19 Crimes

Similarly, Walking Dead-themed wines in the United States use the same concept, bringing characters from the popular television series to life who then share their zombie origin stories when scanned. As one equipment supplier commented: "Now that's a form of augmented reality built into something as simple as a wine label. When people see it work—whoa, what's all that about?"

This innovative approach combines the premium tactile qualities of print embellishments with interactive digital/electronic storytelling to create a memorable and distinctive brand experience that drives consumer engagement and brand recall.

RECOMMENDATIONS

♦ To successfully sell colour embellishments, PSPs must link their value to their customers' specific communication and marketing objectives. Only when customers can understand how embellishments can help achieve key objectives—such as capturing attention, elevating brand perception, or even expanding their reach to larger audiences—can they appreciate the potential ROI (even at a price premium).

♦ It is essential to engage with individuals employed in sales and marketing roles who understand value and ROI, not just printing price. Creative agencies are also a good target.

♦ Price, where possible, should not be based on cost plus a fixed percentage uplift. Depending on how much help and value PSPs have provided to the customer, pricing should be based on how much PSPs can justify. PSPs deserve to charge more when they create a marketing product for their customers that will generate a large ROI.

♦ Printed embellishment samples remain a critical sales tool, but timing is key. PSPs should first ask the right communication and marketing questions that their customers will care about: "Isn't it true that capturing attention in this saturated market is very challenging?" or "Is it important to you to elevate the perception of value of your brand, products and services when communicating with the market?" Only then should PSPs show their samples to connect the embellishments with their customers' main communication and marketing objectives.

♦ Personalized prototypes or mock-ups tailored to a client's actual campaign can help buyers better visualize the value of embellishments. These should be offered at a nominal cost to avoid devaluing the service—charges that can later be deducted from the invoice if the client proceeds with the project.

♦ It is also effective to create embellishment samples of printing jobs that communicators and marketers have done before without embellishments to show the contrast and impact for themselves.

OPINION

The colour embellishment market presents a significant opportunity for PSPs to establish leadership in a growing specialty print segment. Interview findings consistently reveal a clear pattern: While embellishments represent a small percentage of overall print volume, they generate disproportionately high margins and foster long-term, strategic customer relationships. Most PSPs investing in these technologies are seeking differentiation in competitive markets where price-based competition is increasingly difficult.

What stands out is the disconnect between technical capabilities and market adoption. PSPs possess sophisticated embellishment technologies, but struggle to overcome the price premium objection. This gap between capability and utilization represents a key opportunity for them. By focusing on the technical excellence of their solutions and the organic, strong communication values for embellishments, PSPs will be able to grow not only their revenues, but also improve their profits.

The most successful applications are clustered around premium packaging, business credentials, and high-impact marketing materials where creative brilliance directly connects to the communicator's core objectives: capturing attention, elevating the perception of value, and sparking word of mouth.

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Comments or Questions?
Message us if you have any questions or comments.