

WhatTheyTh!nk

Presented By :

Richard Romano + Cary Sherburne

TECH OUTLOOK: DISPLAY GRAPHICS AND TEXTILES & APPAREL

August 27, 2026



Get the most out of this webinar...



**Send us your questions
during the webinar**

*Please use the Q&A box instead
of Chat box to ask questions*



**Video and audio archive will be
available later today along with
PDF of slides**

Powering Large Format Capabilities with the Canon Colorado XL-Series

The Canon Colorado XL-series brings game-changing 3.4m/11ft scale to the display graphics market. Built on modular UVgel technology, it supports both flexible roll-to-roll and rigid media on a single platform.

- **UVgel 860 Ink & White:** Delivers vibrant color, hassle-free white ink, and low-energy curing without clogging or heat damage.
- **Advanced Automation:** Features UVgel DynamicMotion Control and a TRIdrive vacuum belt system for precise media transport and edge-to-edge accuracy.
- **Creative Finishing:** Unlocks premium capabilities like FLXfinish+ (mixed matte/gloss on one print) and FLXture textured effects.



**See the Colorado XL-series live
at PRINTING United in Las Vegas!**

Canon



Richard Romano
Wide Format & Signage



Cary Sherburne
Textiles & Apparel

Display Graphics & Signage



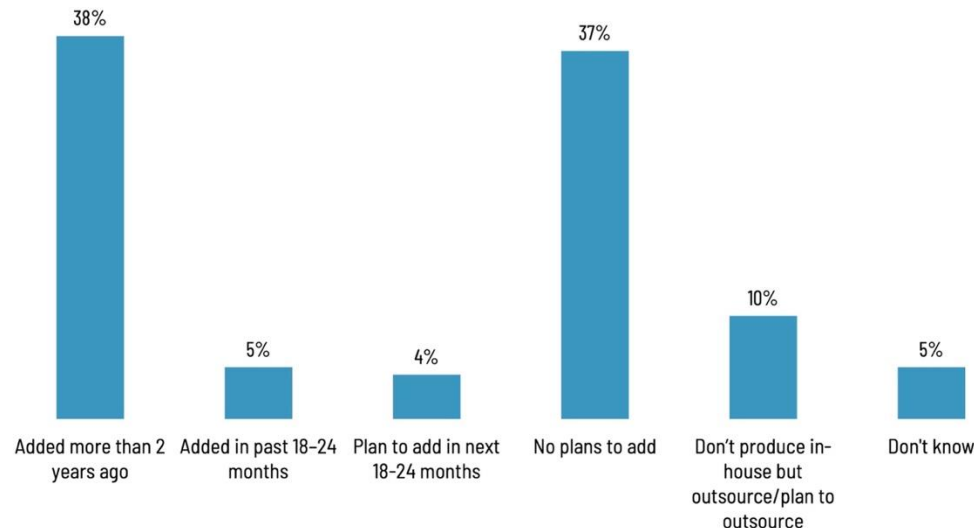
Wide Format & Signage: What Kind of Day Has it Been?

- By the end of the 2010s, the migration to wide-format on the part of general commercial printers had been slowing
- The COVID pandemic of 2020 struck, yadda yadda yadda, 2021 saw things starting to return to normal as we spent the year rebuilding the industry (and the economy), and by 2022, it was “Virus? What virus?”
 - Infamous “supply chain challenges” persisted
- 2023–2025 saw everything back to normal—or to the “new normal”
- 2026 and beyond are seeing shops that specialized in display graphics start to look at diversification into new areas
- Political and economic issues are having more of an impact on print businesses than has traditionally been the case

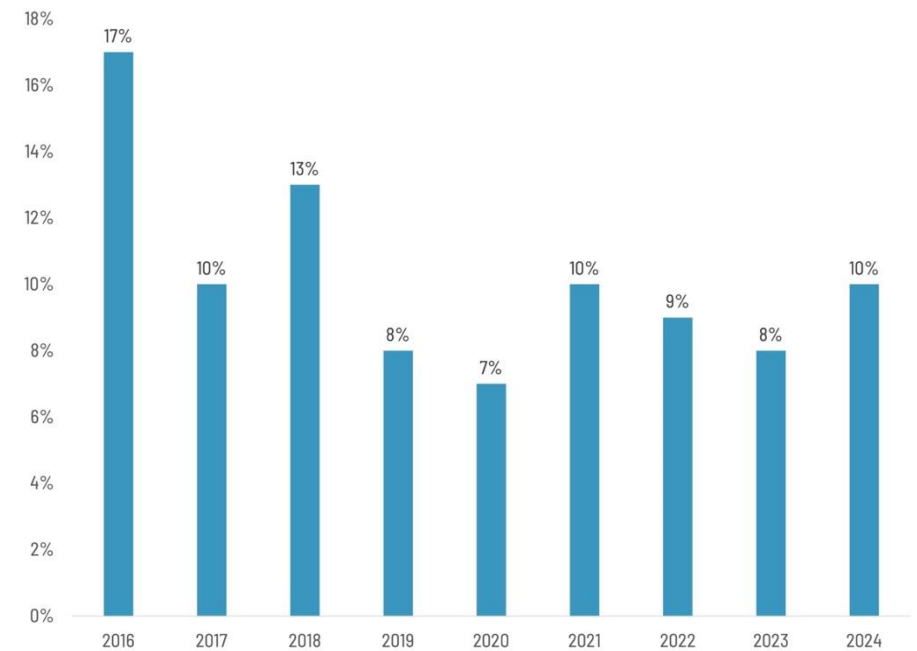
Wide Format & Signage: What Kind of Day Has it Been?

- Wide format is a mature market
- Commercial print migration to wide format is over
 - ~30–40% of the industry are “never wides”
 - Except perhaps among franchises

Wide-Format Printing (like Signs, Displays, Banners)



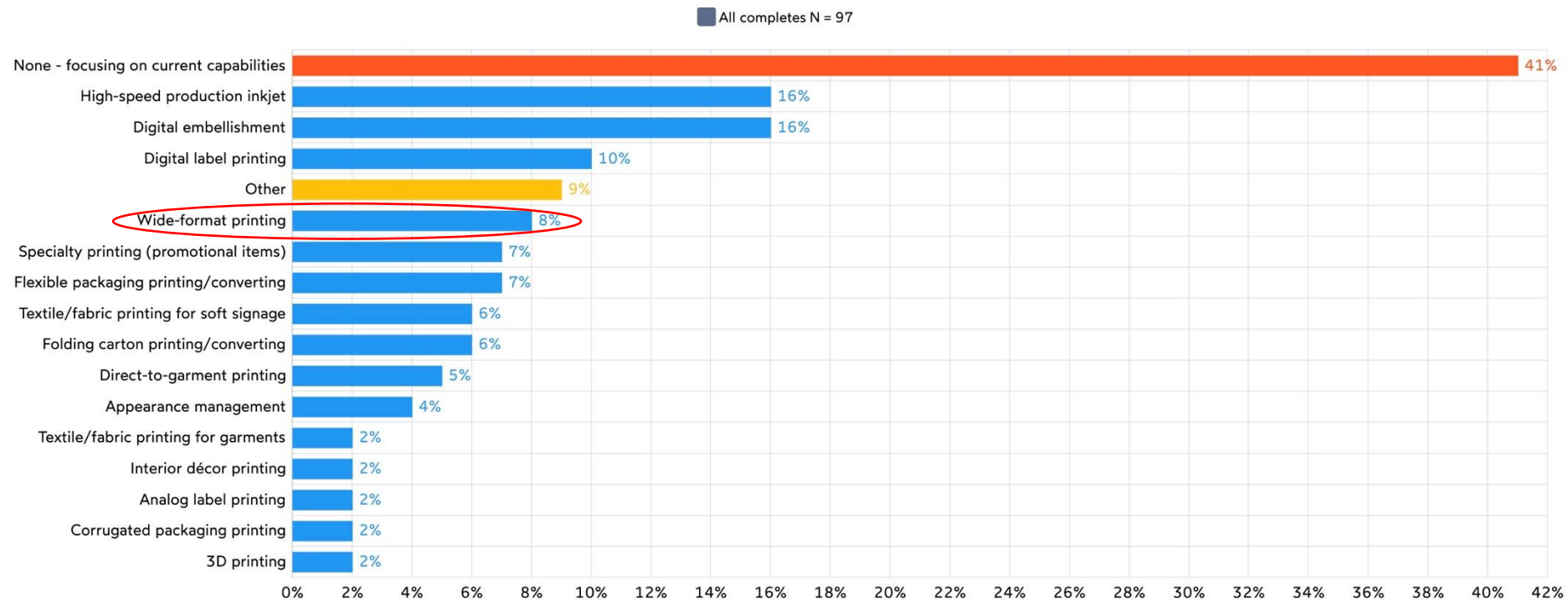
**“Adding Wide-Format Printing Capabilities”
as a New Business Opportunity**



Wide Format & Signage: What Kind of Day Has it Been?

Plan of Services/Capabilities

Question: Which services or capabilities do you plan to add in 2026?



Display Graphics & Signage: Current Trends

Direct-to-Object/Industrial Print Applications

- Wide-format equipment—esp. UV units—have long been used to print on 3D objects
- Mimaki, Roland, e.g., offer rotary attachments for printing on water bottles, etc.
 - Roland has officially branded their UV flatbeds as “VersaObject,” indicating their suitability for printing on objects
 - Roland entered into distribution partnership with LSINC, manufacturer of high-end DTO printers
- DTO is ideal for label-replacement or ad specialty (aka “tchotchke”) printing
- Enables “high-value” printing applications
- Check out David Zwang’s webinar on DTO at <https://whattheythink.com/webinars/309/>



Display Graphics & Signage: Current Trends

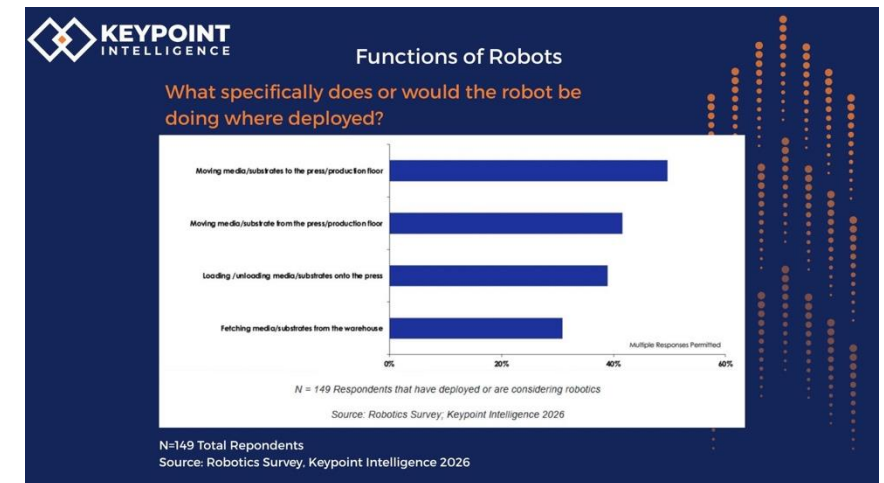
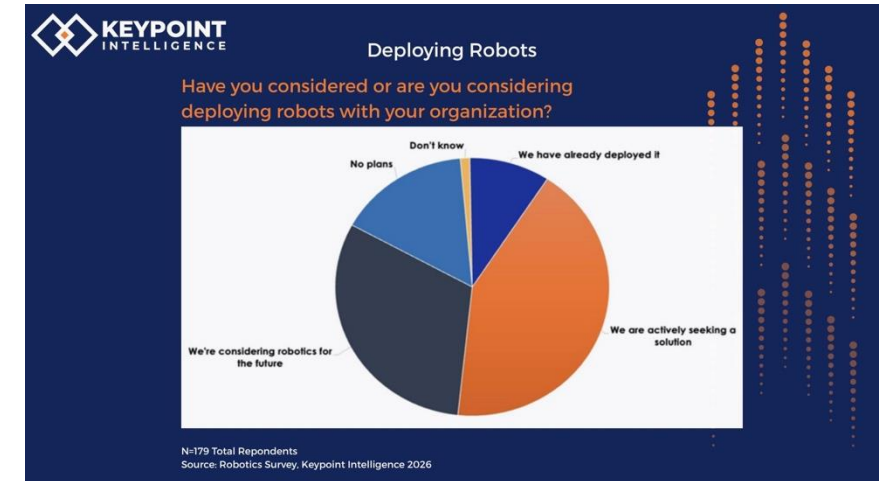
Ink Technologies Often Define End-Use Applications

- Solvent/eco-solvent—inexpensive, commonly used on vinyls for vehicle wraps, window/floor/wall graphics, decals, etc.
- UV—kinda expensive, ideal for non-porous surfaces and 3D objects
- Latex (HP)/Resin (Epson/Roland)—fast-drying, good for textiles, vinyls, and rigid materials (HP Latex R series)
- Dye-sublimation—ideal for textiles (esp. soft signage), as well as 3D objects via transfer media
- Uvgel—Canon-specific ink technology allows for fast printing on a wide variety of rollfed substrates

Display Graphics & Signage: Current Trends

Automation

- Not just software automation but things like robotics (i.e., arms for loading and unloading boards)
- Keypoint Intelligence conducted a short survey (not just of WF printers) at the In-Plant Printing and Mailing Association (IPMA) Conference
 - More than 50% of respondents were already thinking seriously about robotics even before any sessions were held on the topic
- Meanwhile, in terms of software/workflow automation:
 - Reducing reliance on manual “touches” and creating a single work “flow” has become essential for maintaining competitiveness
 - Collection of operational data facilitates consistent output
 - Consolidation of fragmented software environments and standalone tools eliminates bottlenecks



Display Graphics & Signage: Current Trends

Diversification

- Becoming important not just for commercial printers but display graphics producers.
 - The same equipment can produce display graphics as well as packaging, POP, etc.
- **Education markets**
 - For signmakers, education has become a major vertical—more than it ever was
 - Not just colleges, but middle schools, high schools, grammar schools, religious schools
 - Schools at all levels have become more competitive than they used to be
 - The overall look of the institution is a big part of student recruitment and retention

Display Graphics & Signage: Current Trends

Oh, yeah, *that*: AI

- Design
 - More for inspiration than to replace humans—for now?
 - Tools like Adobe Firefly are helping these businesses generate design ideas
 - Staying in Adobe ecosystem avoids licensing/“slop” issues
- Sales
 - AI can be used for “role-playing” to help salespeople have better conversations with prospective customers
- Sign franchises in particular are educating franchisees on AI for these various purposes
- The idea is not to replace anyone with AI, but to use it as a tool to be more productive—for now

Sign Restoration



The Petaluma Signs Project (PSP) is dedicated to preserving the historic signs that have long served as the backdrop to the Petaluma, Calif., community. Their first campaign: recruiting FASTSIGNS of American Canyon to restore the locally famous “hatchery chick” sign—neon and all.



Display Graphics & Signage: Select New Products

Avery Dennison Graphics Solutions

- Five new colors for its Supreme Wrapping Film color change vehicle wrapping film product line

Canon

- imagePROGRAF GP-2600S large-format inkjet printer

EFI

- VUTEk M3H X hybrid LED printer
- EFI Pro 33r roll-to-roll LED printer
- Nozomi 17000 SD 1.7m single-pass printer for sign and display

Epson

- SureColor V4000 UV flatbed printer



Display Graphics & Signage: Select New Products

Konica Minolta

- AccurioWide 320HS

Mimaki

- UJ330H-160 hybrid UV inkjet printer

Roland DGA

- VersaOBJECT LO-640-F3 UV Flatbed Printer

Summa

- F Series Vantage cutting tables

Vanguard Digital Printing Systems

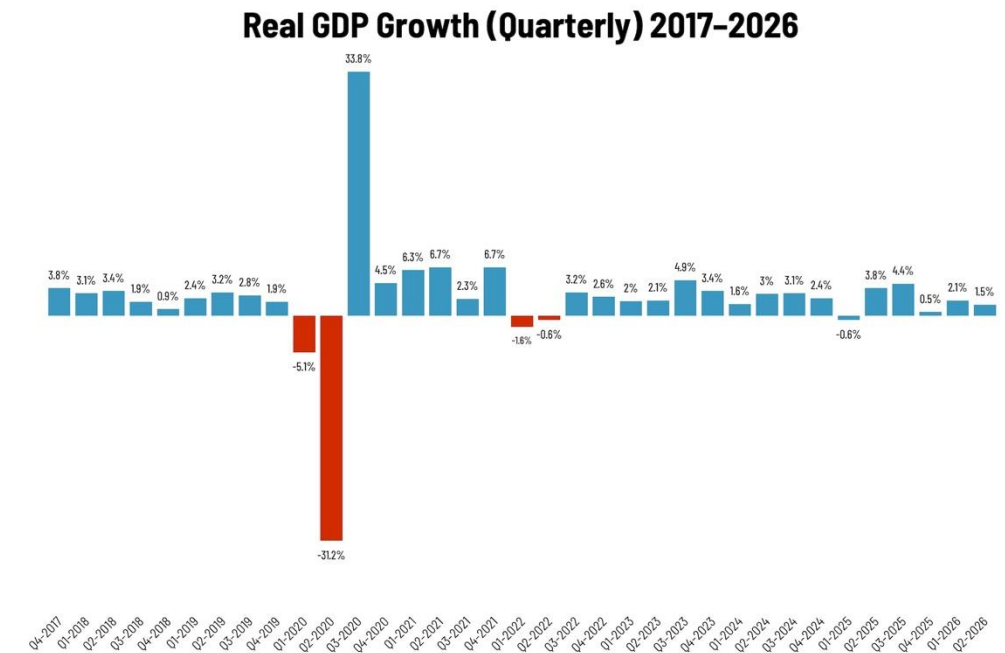
- Natchez flatbed printer



Display Graphics & Signage: 2026–27 Outlook

Economy

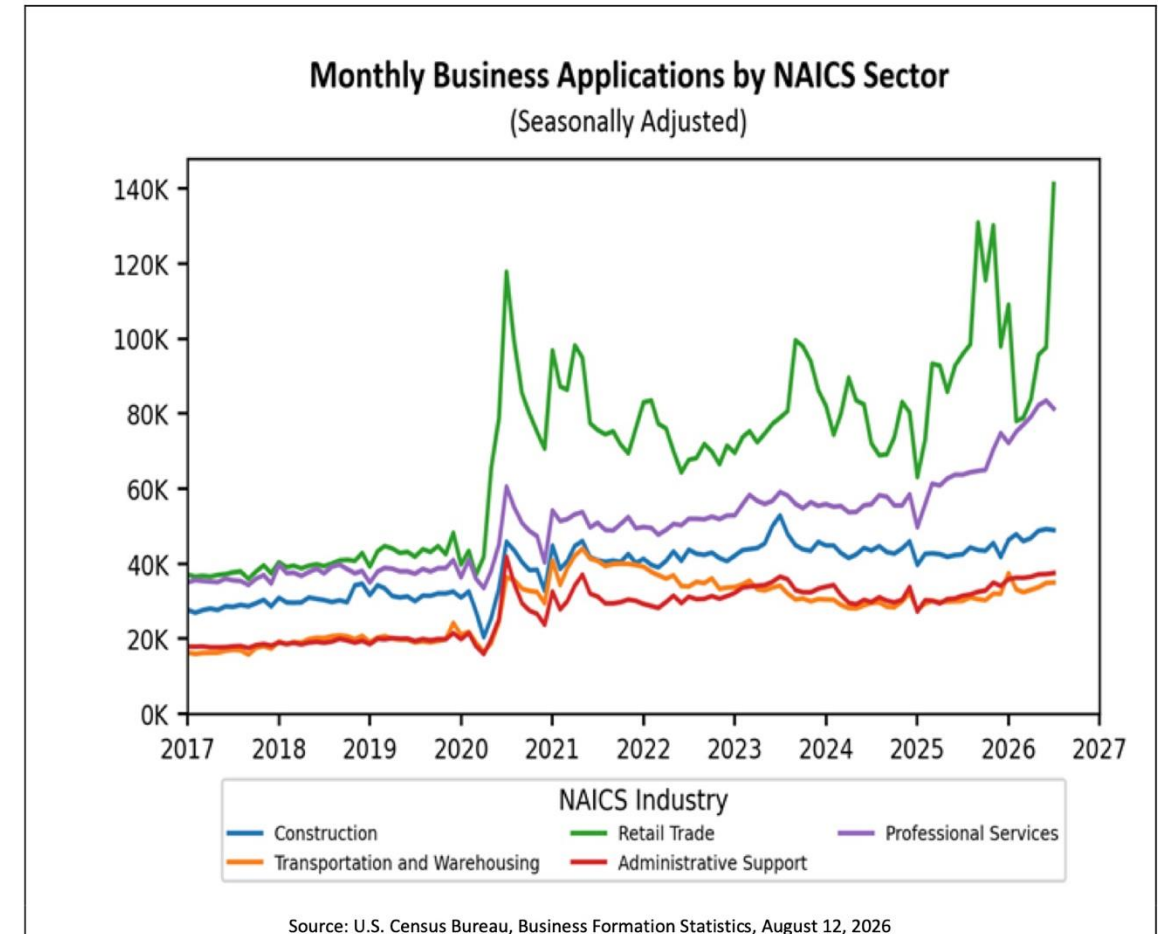
- The print business is often at the mercy of overall economic conditions—and there are signs of trouble
- GDP growth has been sluggish in 2026
- The job market is showing signs of weakening (bad July report)
 - Health care and social services only sectors adding jobs
 - “No immigrant” economy is hurting many sectors
- Inflation is on the rise
 - Cost of *everything* on the rise, esp. energy
 - Data centers plus the switch away from renewables to fossil fuels driving up energy costs



Display Graphics & Signage: 2026–27 Outlook

Employment

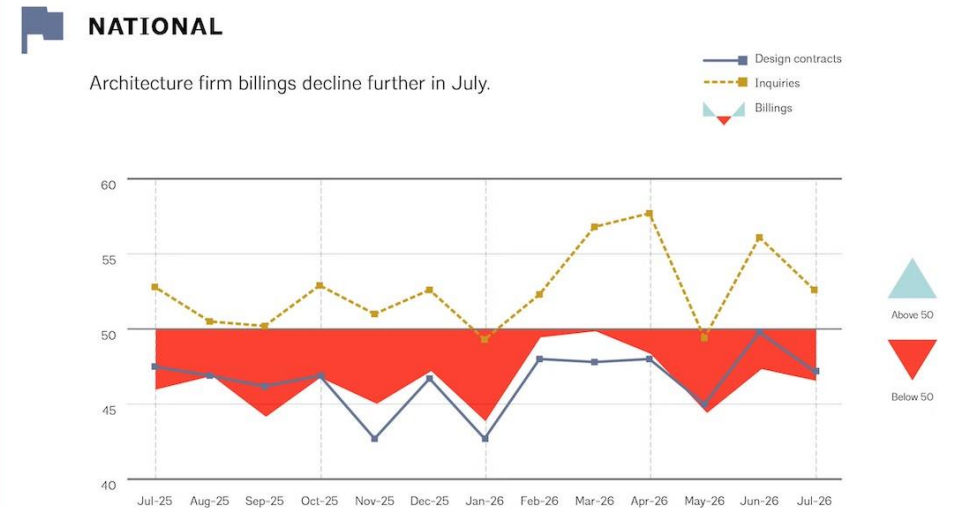
- Two sides to the employment issue:
 - Production staff shortages, yes, but more entrepreneurial business owners, especially in franchises
 - New business formation spiked in 2020 (The Great Resignation)
 - Current Census Bureau data show that it's still at historic highs—especially “retail trade”
 - Many of these new businesses are in traditional wide-format and signage verticals like retail
 - New businesses represent good opportunities for new customers



Display Graphics & Signage: 2026–27 Outlook

Real Estate

- American Institute of Architects (AIA)/Deltek Architecture Billings Index (ABI) is a leading indicator for new commercial real estate investment—and thus potential new signage projects
 - In July 2026, demand for design services continued to be relatively sluggish
 - The Billings Index has been below 50 for the last 41 months—meaning it has been that long since a majority of firms reporting billings growth (anything below 50 is poor)
 - Inflation (especially energy costs) and a sluggish job market were cited as the big issues.
 - Rule of thumb: this index leads actual commercial real estate investment by about 9–12 months



Display Graphics & Signage: 2026–27 Outlook

Tariffs

- Ongoing “tariffopolooza” will impact display graphics producers and signmakers
 - Traditional signmakers use a lot of aluminum construction materials which have already been subject to tariffs (we saw this in 2017)
 - It’s uncertain if US trade policy uncertainty is leading many businesses to forestall major capital investments until things settle down
 - But then no small number of companies are saying “Damn the torpedoes—full speed ahead!”
- There is was a potential bright side
 - Tariff-induced inflation could have been a one-time shock to the system—alas, they are ongoing and capricious

War

- Iran war/on-again off-again ceasefire/Strait of Hormuz closure (or not?) continuing to drive up gas prices, as well as prices of other items that ship through the Strait

Textiles & Apparel

New products, new fibers,
new focus on near-shoring,
re-shoring



Incremental Improvements

- Digital Printing Technologies continue to see incremental improvements
- Wide array of solutions available for businesses starting up or adding a digital textile printing platform
 - We'll review a variety of available options and share a real-life story
- Sustainability news
 - State of the Industry
 - Does local mean more digital?
 - Regulatory actions
 - Recycling
 - New fibers
 - Supply chain issues/reshoring-nearshoring
 - Tariffs
 - Strait of Hormuz

Select Suppliers of Digital Textile Printing Technology

- Durst
- EFI Reggiani
- Epson
- HP
- Kornit Digital



- Mimaki
- Mutoh
- Ricoh
- Manufacturers in China/India
 - Color Inkjet Group (India)
 - HPRT (China)



EFI Reggiani

- EFI continues to build out its textile portfolio
 - Analog solutions
 - Mezzera Pre- and Post-treatment (washing, dyeing, bleaching, mercerizing, denim) has been licensed to a third party to enable a focus on printing
 - Single-pass/Multi-pass
 - VOGUE 3,498 sq ft/hr (**NEW**)
 - NEXT Plus 4,036 sq/ft hr
 - COLORS (7,685 sq ft/hr)
 - TERRA/ecoTERRA (7,759 sq ft/hr)
 - POWER (14,854 sq ft/hr)
 - EXTRA 17,115 sq ft/hr (**NEW**)
 - HYPER (33,906 sq ft/hr)
 - FabriVU w/inline sublimation
 - Wide range of proprietary inks



Kornit Digital

- Direct-to-garment/direct-to-fabric solutions
 - Atlas MATRIX DTG, Multi-Fabric printer (NEW)
 - Presto MAX Direct to Fabric
 - Atlas MAX PLUS/MAX Poly DTG (dedicated polyester)
- Aggressive partnering strategy for end-to-end solutions; e.g.:
 - Recently acquired Netherlands-based PrintFactory, adding automation and a path to further digitize the screen printing market (video interview on WhatTheyThink)
- Proprietary NeoPigment water-based inks



Epson

- SureColor F6470, F9570, F10070 Series, and sublimation printers
 - From 820 sq ft/hr to 2,700 sq ft/hr
- SureColor F1070 Business Edition, hybrid DTFilm/DTG (also available in Standard Edition)
- Epson SureColor G9070 Dedicated Direct-to-Film
- UltraChrome DS inks
- Fiery Acquisition (New CEO Micah Kornberg)



Mimaki Moves Upmarket

- Diverse range of digital textile printers
 - **330 Platform DTF Concept Model:** Next-generation industrial Direct-to-Film platform designed to transition garment decorators away from entry-level desktop DTF previewed at FESPA
 - **TxF300-75Plus:** An updated addition to Mimaki's DTF line featuring enhanced white ink circulation stability
 - **Tx330-1800 / Tx330-1800B Series:** Direct-to-fabric inkjet printers designed for “waterless” digital textile printing across diverse fabric types



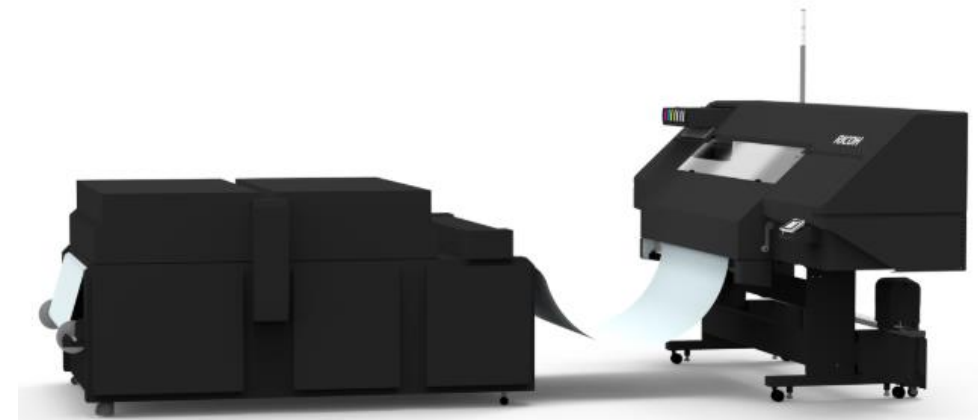
Durst Places More Focus on Textiles

- **P5 350 CORE:** Launched at FESPA 2026, a hybrid platform is an entry point into the P5 ecosystem for mid-market print shops. Software optimizations that cut ink consumption to an average of 6 ml/m².
- **P5 350 HSI:** High-speed industrial platform updated with Digital Substrate Alignment (DSA) software to automatically scan and reposition misaligned or uneven textiles.
- **Merger with Aleph resulted in Durst Como,** €20 million technology and production hub for digital textile printing in Luisago (Como), Italy, signaling an increased focus on the textile market.



Ricoh

- DTG and DTF printers
 - **RICOH Pro D1600 DTF:** An industrial, high-volume DTF system built for media widths up to 51 inches, 215 sq ft/hr
 - **RICOH Ri 1000X (DTG/DTF Hybrid):** An updated evolution of the Ri 1000 platform, incorporating powder shaker and drying unit



Direct-to-Film Continues to Grow

- Multiple vendors are now providing either hybrid DTG/DTF or dedicated DTF solutions
- When to use DTG v. DTF? One producer indicated:
 - Not having the ability to print DTG on polyester garments was definitely a hole in our offerings. We could cover that hole by printing with DTF, but the hand and the finish on a DTF product is not the same as what you do on a DTG.
 - “I personally think that not only is the hand feel better on DTG as compared DTF, but I think in a lot of instances when you're talking about a one-piece print, it's cheaper to do it on DTG. The typical DTF process, where you're printing a film, cutting a film, matching a film, and pressing it on the garment, is a lot of touches. With DTG, you're printing on polyester with nothing more than a scan and print.”
 - “The film and adhesives used for DTFs get better every year, and the gap is shrinking. But when you're printing a full front for a polyester shirt, that full front print just feels like body armor when you use DTF.”
 - This producer has found the right balance between the two and has also acquired a DTG press that can print directly to poly and poly blends. Both technologies have a place in today's operations.

The State of the Textiles Industry

- Textile factories closing at a rate reminiscent of the 80s
 - Brussels-based trade group Euratex reports a decline that has trended since mid-2022, with textile factories closing every week with no single cause explaining it
 - In the U.S., more than 40 textile plants have closed in just 2.5 years.
 - The U.S. saw a \$3 billion decline year over year in man-made fibers, textiles, and apparel shipments.
- China still dominates, but brands are adopting a China-plus-one strategy
 - Prioritizing Western hemisphere nearshoring
- International Textile Manufacturers Federation, found many manufacturers are diversifying away from the U.S. due to tariffs.

But, But, But...

- Economic turmoil is also driving some volume back to the U.S.
 - Glossy reports California is the leading U.S. state for apparel manufacturing, and L.A. remains its main hub, accounting for 23% of U.S. employment in the sector.
 - More brands are expressing interest in producing locally.
 - Moves driven by a combination of factors, including time to market, tariffs, Hormuz-related issues.
 - Case in Point: LA based Rat Boi is able to restock sold-outs within 4 weeks—not the 12 weeks required using an overseas manufacturer.



Does Local Mean More Digital?

- Maybe...
- Globally, digital textile printing accounts for approximately 6% to 10% of total printed textile volume, surpassing 3.2 billion sq m globally.
- More than 38% of soft signage is digitally processed.
- Major production centers like China project digital inkjet output to reach 35% of domestic volume by 2030, driven by water-use restrictions and on-demand fashion models.
 - Transport time/cost and tariffs still a factor WRT exports
- For more sustainable operation and the ability to better meet customer needs, modern plants need a balance between analog and digital.



Regulatory Actions

- Extended Producer Responsibility regulations being implemented around the globe
 - Makes clothing brands and retailers financially responsible for managing their products' waste, including collection, reuse, and recycling at the end of life.
 - EU, California, New York, Washington, Hawaii, Massachusetts, Oregon, either passed or are exploring EPR regs. Implementation in California is well underway.
 - If products are sold in the region, brands/retailers are responsible even if they have no physical location in the region
 - Do regs apply to you? More info here: <https://h2compliance.com/navigating-the-expanding-landscape-of-us-textile-epr-in-2025-beyond-california/>
- Europe continues to outpace the U.S. in sustainability regulations. Efforts to align regs across country borders designed to make compliance and enforcement easier.
- More bans on intentionally added PFAS (forever chemicals); Texas investigates Lululemon.

Recycling...

- EPR regs will drive more downcycling/upcycling/recycling of textile products
- Polyester fabrics have a 54% to 70% market share, depending on source data. (includes polyester blends like poly/cotton)
- Apparel recycling complicated—most fabrics are not mono fiber and it can be difficult to determine composition and/or separate fibers
- Many yarn manufacturers use some level of recycled content, fewer use bio-based fibers, but demand for that is growing (renewable feedstocks)
- Textile waste can be ground to produce insulation, mattress stuffing, etc; landfill diversion

New Fibers Entering the Scene

- Mushrooms, anyone? Chinese researchers created a textile from living mycelium that is self-cleaning, self-repairing and can be colored.
 - Living organisms that stay alive even after they are fabricated.
- Other biobased offerings: Banana stem fiber, Algae and marine-based biomass, cottonized hemp
- Infinna from Infinited Fiber Co., mimics natural cotton and made from post-consumer waste.
- Circulose, made from discarded cotton garments
- Light-responsive self-healing fibers (no mushrooms)
- And, of course, Graphene-enhanced fibers.



CreateMe Takes a Different Approach

- Threadless automated garment assembly could address scarcity of sewing labor
 - Adhesive technology replaces sewing
- NEW: Seed to System partnership; Avalo, Laguna Fabrics, CreateMe,
 - Sustainable hybrid cotton seed, U.S. manufactured fabrics, automated garment assembly



The Bottom Line

- Digital textile printing is relatively mature but continues incremental improvements; growth, however, seems stalled.
- Suppliers to the industry are working to create end-to-end workflows using proprietary technology or through partnerships
- It is not clear what the long-term impact of tariffs will be, but ...
 - It seems to be stimulating near-shoring and re-shoring
- In an ideal world ...
 - Apparel would be manufactured on demand, close to point of need, using digital technologies—Seed to System is a good start!
 - Consumers would demand sustainable, high-quality textile-based products and say No to Fast Fashion
 - Textile products would be primarily comprised of recycled content
- The challenge: Driving major change in textiles & apparel is a slow process!



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TO FAST
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Q&A

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questions!

questions
are a burden to others
answers
a prison for oneself

Upcoming Webinars

Technology Outlook Week Concludes!

Friday, August 28—Appearance Management w/Don Carli, sponsored by Tecnav

The Evolution of Inkjet in Direct Mail—Market Forces and Technology Shifts

Wednesday, September 9—Presented by Ramya Krishnan, Business Segment Manager, Specialty Printing & Technology Solutions, for HP Inc., and Kevin Loos, VP Sales & International Business for MCS. Sponsored by HP/MCS

For more information and to register, visit

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Thanks for attending!