GUIDE TO DAY FOURTEEN:

DIGITAL TEXTILE

INSIDE:

OPPORTUNITIES IN DIGITAL TEXTILES

SUSTAINABILITY IN THE FASHION INDUSTRY – WHERE IS IT HEADED?

DIGITAL TEXTILES TRANSFORM RETAIL ENVIRONMENTS

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Welcome to this special publication for attendees of the 2020 PRINTING United Digital Experience.

In June, PRINTING United announced the decision to transition from an in-person event in Atlanta, to a comprehensive digital platform. The PRINTING United Digital Experience, taking place Oct. 26-Nov. 12, offers attendees three weeks of live, guided programming, educational sessions, and panel discussions with the experts; along with access to a complete online exhibitor showcase featuring information about the newest industry technology, case studies, whitepapers, the chance to speak with exhibitor representatives, and more.

Today is the last day of this 14-day event. Focused on the digital textile market, attendees have a packed schedule of content and product demos (see the detailed agenda on page 6).

Textile printing as a whole remains one of the single most environmentally un-friendly manufacturing processes still in use today. The chemicals and inks required to produce fabric for everything from high fashion to the living room couch remain fairly unchanged from their original roots.

Digital textile printing, however, is looking to change that. While the technologies for printing textiles have been around for several years, COVID-19 and the global pandemic are accelerating the demand and the opportunities will only continue to grow.

The report “Digital Textile Printing Market by Ink Type (Reactive, Acid, Direct Disperse, Sublimation, Pigment, and Others) Substrate (Cotton, Silk, Polyester, and Others), Application (Clothing/Garments, Households, Technical Textiles, Display and Others): Global Opportunity Analysis and Industry Forecast, 2020-2027” from Allied Market Research notes, “The global digital textile printing market was valued at $2.2 billion in 2019, and is projected to reach $8.8 billion by 2027, growing at a CAGR of 19.1% from 2020 to 2027.”

Traditional sublimation inks are currently the most popular technology in use, and the report doesn’t see that changing in the next decade, given the versatility and prevalence of sublimation options on the market today, and the wide range of substrates that can accept sublimation inks.

On the other hand, while direct-to-print options are still a very small portion of digital textile printing, it will also likely prove to be one of the more lucrative segments, as pigment inks allow for a true one-to-one comparison with the traditional textile production methods, eliminating virtually all of the tradeoffs going digital requires today.

In terms of applications, signage is, and will likely remain, one of the single biggest verticals for digital textile printing. Fabric signage often has fewer requirements in terms of needing a more “luxury” look and feel, so the tradeoffs in color vibrancy, color fastness, and hand-feel, among others, are more than worth it for the faster speeds, more variable options, and exponentially more sustainable processes.

As part of the product demos today, you’ll be able to see products from TVF, HP, Kornit Digital, and Epson.

As a companion to the 2020 PRINTING United Digital Experience, these 14 special daily publications will provide attendees with a reference guide to the day of content, as well as much-needed insights into how print services providers can best position themselves now for the recovery — and growth — to come.

We hope this information will help serve as a valuable resource as you plan the next steps for your business, and determine where — and how — to expand and grow.
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DAY 14: NOVEMBER 12, 2020

DIGITAL TEXTILES

10:00 a.m.
Keynote: How to Build a Digital Textile Business

Presenter: Dave Meleo, President, New Vision Imaging

Running a digital textile business isn’t just a matter of installing a new press and running fabrics through it. Beyond just having the right equipment in place, what types of products are you going to produce? How do you market this new opportunity? How are you going to make a profit out of this new venture? This session will take a closer look at what you need to know to build a successful digital textile printing business from the ground up.

10:30 a.m.
PRODUCT DEMO: TVF FABRICS

From home décor and apparel, to sign and graphics and industrial applications, imagine being able to pick out a pattern or print and make it your own. TVF introduces attendees to its fabric experts to discuss opportunities in the digital textile market, and its wide selection of fabric solutions fit for various types of printing technologies and markets.

10:45 a.m.
PRODUCT DEMO: EPSON SURECOLOR F10070

Timothy Check, senior product manager, Epson, showcases the company’s latest innovations in high-production dye-sublimation printing. He explores the breakthrough technologies featured in the new SureColor F10070 dye-sublimation print system, including Epson’s latest PrecisionCore printheads, high capacity ink system, reliability features that reduce maintenance, and other features designed to deliver fast production speeds with outstanding sellable quality.

11:00 a.m.
PANEL DISCUSSION: WHAT ARE BRANDS LOOKING FOR VS. WHAT CAN DIGITAL TEXTILES PROVIDE?

Moderator: Denise M. Gustavson, Editor-in-Chief, Wide-format Impressions and Editorial Director, Impressions Group, NAPCO Media

Panelists:
David E. Clevenger, Principal, Parallax Digital Studios Inc.
Terry Combs, Sales and Training, Equipment Zone

Across the board, brands are looking for ways to connect with customers, drive trends, and cut costs. How can digital textile printing help? What do these brands really want from their print providers? What is
holding them back from switching to digital textile printing over traditional methods? And how can PSPs be the driving force behind the next generation of textile printing?

11:30 a.m.
**PRODUCT DEMO:**
**HP STITCH LINE**
HP has reinvented dye-sublimation technology for the industry with its HP Stitch portfolio of printers. The portfolio of printers couples HP Thermal Inkjet technology with industry-standard dyes for superior color durability. The first-ever built-in spectrophotometer enables Stitch’s fast and exact color-matching. The portfolio includes three new printers from 64” to 126” wide: the HP Stitch S300 64”, the HP Stitch S500 64”, and the HP Stitch S1000 126”.

11:45 a.m.
**PRODUCT DEMO:**
**KORNIT DIGITAL PRESTO**
Kornit’s Presto direct-to-fabric system provides a complete on-demand solution for printing, softening, and drying in a single step. From fashion to baby textiles, to home décor, the Presto delivers high-quality prints, vivid colors, and great hand-feel on multiple fabric types.

12:00 p.m.
**PANEL DISCUSSION:**
**TEXTILES AND COLOR ASSURANCE**
Moderator: Ray Weiss, Director of Digital Print Programs, PRINTING United Alliance

Panelists:
Jim Raffel, CEO, Color Casters
Mary Song, Print Production and Color Manager, Tectonics

When it comes to digital textile printing, what is “good enough” color? As more brands begin to venture into digital textile printing and experiment with what the technology can provide — from fashion to home décor and beyond — how can PSPs ensure jobs are always the right color, every time? What factors need to be considered when printing on textiles, and how can color be matched across not only different fabrics, but to other substrates as well?

“A specification is not our eyes — it’s a bunch of numbers. The ultimate arbiter of color is a human being.”
— Jim Raffel, CEO Color Casters, in the Textiles and Color Assurance panel discussion.
**Opportunities in Digital Textiles**

By Toni McQuilken, Senior Editor, Impressions Group, NAPCO Media

Textile printing, worldwide, remains one of the single most environmentally un-friendly manufacturing processes still in use today. The chemicals and inks required to produce the bold and vivid fabric options for everything from high fashion to the living room couch remain fairly unchanged from their original roots.

Digital textile printing is looking to change that. The technologies for digitally printing textiles have been around for several years now — steadily improving and expanding what they are capable of producing in both the color range and hand-feel. COVID-19 and the global pandemic is accelerating the demand, and the opportunities will only continue to grow from here.

The technologies for digitally printing textiles have been around for several years now — steadily improving and expanding what they are capable of producing in both the color range and hand-feel. COVID-19 and the global pandemic is accelerating the demand, and the opportunities will only continue to grow from here.

The report “Digital Textile Printing Market by Ink Type (Reactive, Acid, Direct Disperse, Sublimation, Pigment, and Others) Substrate (Cotton, Silk, Polyester, and Others), Application (Clothing/Garments, Households, Technical Textiles, Display and Others): Global Opportunity Analysis and Industry Forecast, 2020–2027” from Allied Market Research notes, “The global digital textile printing market was valued at $2.2 billion in 2019, and is projected to reach $8.8 billion by 2027, growing at a CAGR of 19.1% from 2020 to 2027.”

Traditional sublimation inks are currently the most popular technology in use, and the report doesn’t see that changing in the next decade of growth, given the versatility and prevalence of sublimation options on the market today, not to mention the wide range of substrates that can easily accept sublimation inks. On the other hand, while still a very small portion of digital textile printing today — and likely to remain a small portion even as manufacturers continue to improve and refine segment — it also will likely prove to be one of the more lucrative, as pigment inks allow for a true one-to-one comparison with the traditional textile production methods, eliminating virtually all of the tradeoffs that going digital requires today.

In terms of applications, signage is, and will likely remain, one of the single biggest verticals for digital textile printing. Fabric signage often has fewer requirements in terms of needing a more “luxury” look and feel, so the trade offs in color vibrancy, color fastness, and hand-feel, among others, are more than worth it for the faster speeds, more variable options, and exponentially more sustainable processes.

That said, the household market will likely grow to be one of the most lucrative verticals, especially as COVID-19 has shifted the way consumers think about their spaces. With more people staying home — a trend that many experts predict will continue in 2021, and likely beyond — the drive to re-invent spaces, make them more personal, and do so more frequently than in the past is leading consumers to look for new options, including the ability to personalize fabrics for everything from their curtains, to the carpet, to the upholstery, to the linens. While many print service providers (PSPs) focus more on the B2B than the B2C space, the reality is that there is a massive, growing demand for digital textile printing that PSPs with digital textile printers are well positioned to fill, if willing to take the risk.

What’s Holding Digital Textiles Back?
So with all the benefits that digital textile printing can bring to the table, and the growing demand for very short run, personalized
fabrics, why hasn't it exploded onto the scene more quickly? There are a few things still holding the technology back, although manufacturers of both hardware and substrates are narrowing the gaps at a rapid pace.

1. **Color.** Because most digital textile printing is sublimation, the reality is that it just doesn't get the same “pop” as pigment or other ink technologies. It can appear more faded, and it can be more difficult to hit specific brand colors, which has made it unappealing for applications such as high-end fashion, where every piece can’t just be “red”, it has to be the very specific version of red the brand has built its entire identity around, for example.

As ink technologies improve — including sublimation inks — this is getting better. The ability to get richer colors, and to have digital textiles that are color-matched to the specific brand colors in other parts of a campaign, is slowly increasing. Of all the trade-offs for digital textile printing today, this is likely going to be one of the first areas that is completely conquered.

2. **Feel.** While fabrics for signage or display aren’t typically touched after installation, fabrics used in fashion and home décor are, by their very nature, designed to be regularly against skin in some fashion. This means they need to be soft, not have the color rub off, and have an appealing texture. Because digital textile printing often requires coatings or treatments to marry the ink and fabrics, it can have a major effect in the hand feel of the finished product, producing stiff, scratchy results that aren’t necessarily comfortable to handle.

Substrate manufacturers, in particular, are working hard to create versions of their fabrics that have the necessary properties to retain ink without needing the extra chemicals, which in turn produces softer, more versatile textiles. As both they, the ink manufacturers, and the printer OEMs continue to improve and evolve their products, this is another gap that will rapidly shrink.

3. **Speed.** While on demand, personalized fabric applications are starting to see the light of day, they are still very much the minority. Most fabrics produced for everything from fashion to home décor are done on very large scales, with hundreds, if not thousands, of yards of the same pattern produced at a time. This is not the business model for digital printing in general, much less for digital textiles, but like with digital printing, it will be up to PSPs to help brands and consumers find creative ways to use fabrics in much smaller quantities.

Some fashion brands have already started to experiment, with some designers beginning to realize the power of being able to design small batches of custom fabrics for their projects. As well, many fashion brands are starting to produce a higher quantity of collections with smaller volumes throughout the year, rather than the traditional seasonal offerings. Consumers today want fresh options far more regularly, and brands are adapting — which means the manufacturers will have to adapt as well, opening the door to PSPs with digital textile printing experience.

The bottom line? Digital textile printing might be a small segment of the print industry today, but it is poised to be one of the fastest growing as the world continues to look for both more personalized fabrics, as well as more sustainable production processes. Creativity and a willingness to invest and test new technologies as they become available will set the bar high, and provide a powerful path to growth for any PSP willing to take the risk.
Fashion and sustainability. These two words are being used together more and more frequently. Just like in the packaging world, we are seeing brands making statements and commitments regarding their efforts to bring products in line with sustainable goals and objectives. The first question you should ask is why? What is the problem with fashion and sustainability? And the second is, are there solutions? We will explore both but first, let us set the stage with a short look at circularity — the new buzz word.

A circular economy, as defined by the Ellen MacArthur Foundation, is based on the following three principles: designing out waste and pollution, keeping products and materials in use, and regenerating natural systems. In 2017, Make Fashion Circular, an initiative through the Foundation, was launched at the Copenhagen Fashion Summit. The goal is to encourage collaboration and innovation to create a new textiles economy aligned with the principles of a circular economy. An example is the Jeans Redesign Guidelines, published by the MacArthur Foundation; iconic brands such Lee, GAP, and Tommy Hilfiger, adopted the guidelines, which set standards to ensure jeans last longer, can easily be recycled, and are made in a way that is better for both the environment and the health of garment workers.

Fast fashion has brought a hyper focus on the impact of textiles on the environment. The Product Stewardship Institute estimated that each year 13 million tons of textiles are disposed into landfills, as less than 15% of used textiles are recycled. Decomposition of clothing releases methane gas, and according to some scholars it takes cotton one to five months to degrade, and synthetic fibers up to 200 years. In addition to a focus on the impact on landfills, there is water usage. It has been estimated that it takes up to 713 gallons of water to make one cotton shirt. The environmental impact associated with the creation of fiber, processing, dying, and assembling clothing has brought a detailed focus on the fashion industry.

A Brighter Future
However, there is good news! Leaders are emerging and setting
the stage to help create a more circular economy for fashion. At the core of the efforts is a focus on reducing impacts from manufacturing textiles to recycle, reuse, and most importantly, provide transparency. For example, H&M, through the Fashion Transparency Index, provides information on their suppliers, supply chain policies and practices, and social and environmental impact. The Index is an annual report by the global movement Fashion Revolution that reviews and ranks 250 of the biggest global fashion and apparel brands and retailers.

Patagonia is one brand that has long been recognized as a sustainability leader in this space. Nearly 70% of Patagonia’s products are made from recycled materials, including plastic bottles, and their goal is to use 100% renewable or recycled materials by 2025. Their efforts go beyond a focus on their products, and includes attention to fair trade and regenerative organic agriculture. And Patagonia’s long-standing model of taking back worn clothing for reuse is being adopted and replicated by other major brands.

Other companies have also emerged as leaders with the goal of removing clothing from landfills. The Renewal Workshop, for example, is providing circular economy solutions for apparel and textile companies. They partner with apparel brands and retailers to recover value from unsellable returns and excess inventory. To help brands turn this potential waste problem into an opportunity, the Renewal Workshop developed metrics that illustrate the impact of unsellable inventory, allowing customers, brands, and retailers to visualize it and make more informed choices.

The question remains as to how this information impacts textile printers. First, it is important to understand the pressure your customers are facing as it relates to providing a more sustainable product and supply chain. It is crucial that, as a printer, you educate yourself regarding your customers’ programs and initiatives. The other looming question is which print process is more sustainable — digital or screen printing? Advocates for digital printing indicate this is the only path forward. However, as we have learned from even this brief article, your customers’ sustainability programs encompass more than just the print technology, but the overall environmental process, including societal as well as economic impacts.

Rather than focus on just one element, take a step back and look at the entire printing operation. Has your company adopted a robust sustainability program that clearly sets forth your goals? What steps are you taking regarding the transparency of your supply chain operations? Do you know where your garments are made? Do you consider fair trade issues as they are associated with the textile products you produce?

Consider gaining certifications that can help you validate your actions to your customer base. Explore the Sustainable Green Printing Partnership Program to gain certification for your printing operation, or look at B Corporation certification.

As you consider your options, remember that the challenge is to identify actions today that will create a more sustainable tomorrow.

digital.printingunited.com | November 12, 2020

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Digital Textiles Transform Retail Environments
As digital textile printing technologies improve, brands and storefronts are eager to embrace the possibilities they bring.

By Paul Bobnak

Interest and usage of digital fabric printing is rising fast. Printers like having more material options because it means more high-quality solutions for their customers. And retailers? Well, everyone wants their signs to stand out in a bold way, with better color reproduction, and no wrinkling or creasing. Opportunities exist for companies — both PSPs and fabric suppliers — to meet the increasing demand, particularly in the retail space.

Defining (and Redefining) Retail Spaces with Fabric
To more effectively compete with e-commerce, retailers have sought to create more unique brand experiences for their customers at the point-of-purchase. Signage has become an important part of enhancing a store’s use of colors, logo placement, and other branding elements.

“Textiles provide a new opportunity for retail spaces to provide vibrant, expensive looking graphics,” Kylie Schleicher, product manager at Randolph, N.J.-based Ultraflex Systems, says. “The graphics can be used for backlit displays or hanging signs, and provide a softer feel than traditional PVC banner graphics.”

“SEG is heavily used because of its clean look and wow factor,” says Sharon Roland, advertising and PR manager at Fisher Textiles, based in Matthews, N.C. “It is very popular for mounted wall graphics or as a free-standing structure to designate areas such as pop up shops and temporary retail spaces. SEG structures give just the right amount of definition and privacy, while also providing the necessary area for brands to promote messaging and enhance the consumer experience.”

The majority of digital textile applications include backlit graphics, and stretch or SEG for display frame systems, Michael Compton, print media product marketing manager, TVF in Carmel, Ind., says. Brands with an extensive store presence or reach have a need for identical graphics at all of their locations. Their print vendor should, “utilize consistent fabrics for each application, record, and store precise measurements of frontlit and backlit frame systems, as well as properly profile each fabric,” he says, in order to win repeat business and recurring revenue streams.

Besides a high-quality, vivid, glare-free, and borderless image, Silicone Edge Graphics (SEG) provide a versatile and hassle-free solution for retailers. It eases bottom-line concerns like convenience, set up, storage, and cleaning.

Roland cites one big advantage of SEG graphics: “Due to the stretch of fabrics, fabric install/dismantle is very easy and unskilled labor can change out the graphics.” Additionally, because, “the framing systems are made out of lightweight aluminum,” shipping is less expensive.

That said, there are additional applications that offer opportunities for PSPs serving the retail industry. For example, “interior and exterior storefront banners, double-sided blockout graphics, retractable banner stands, tablecloths, pillowcase displays, flags, and more,” all help brands expand their retail environment, Compton states.

He adds that there’s another application designed to grab the attention of shoppers: the storefront window graphic. It uses attention-getting images, “often in frontlit SEG frames or banners sewn with pole loops at the top and bottom of the graphics to keep the finished prints tight and wrinkle-free,” to bring customers into a store.

As digital printing technologies advance, PSPs can offer more quick-to-market options for retail customers, according to Compton. Printers, he says, “can queue up graphics for multiple campaigns and make quick adjustments within digital design files. Since the printed graphics are lightweight, they can easily be drop-shipped to multiple locations, on demand, to meet requirements of clients and end users.”

Why Choose Fabric Over Vinyl?
Brands look at a variety of factors when considering textile signage for retail spaces. These factors have increasingly led to great adoption of fabrics. For one, it has a greater appeal to the senses of shoppers. “Fabric is more visually appealing than vinyl, and it also introduces the sense of touch,” Roland says.

She points out that, “certain fabrics also have light dispersion properties and can be backlit or frontlit,” which makes those printed signs pop in a retail environment.

“Textiles for retail display have various looks, feels, and textures,
allowing retailers and PSPs to select the best fabric for the appropriate application, Compton says. Regardless of which options a brand might prefer, he adds that printers should work with fabric suppliers on the best textile for each specific application.

Another important factor is how it provides a reduction in costs at several points in the process. According to Schleicher, “Fabrics that are being used for SEG frames are easy to install, and can be done at the store level as opposed to requiring professional installers,” and perhaps require only minimal training. And as Roland points out, “[fabric] can be engineered for wrinkle resistance, to fold and ship in small boxes and save on shipping and handling costs.”

Schleicher also notes that environmental awareness, as well as Californian and European regulations, are leading companies to seek alternatives to vinyl usage. “Fabrics typically do not contain phthalates, heavy metals, or other compounds that would be restricted under Proposition 65 and REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals),” she says.

More broadly, Compton calls the growing worldwide focus on sustainability a major reason for the move toward textile signage. “Sustainability is critical to fabric suppliers and PSPs as major brands are pushing these initiatives” at many points in their supply chain, he says.

A lighter and more flexible substrate results in lower fuel and labor costs. Fabric can be made from recycled products, such as plastic bottles, and may also be recyclable depending on the vendor. And water-based inks typically mean a reduced carbon footprint.

“It is critical to be aware of manufacturing processes and certifications if you want to capture and keep retail textile graphic business,” Compton says. “Become members of and follow SGIA (Specialty Graphic Imaging Association) Government Affairs and become SGP (Sustainable Green Printing Partnership) Certified,” he advises, as it’s slowly becoming a retailer requirement for companies in their supply chain.

How to Serve the Retail Textile Marketplace

When compared with traditional vinyl work, the increased adoption of digital textile printing gives printers additional options for retail customers. For example, merchandising leasing programs are becoming more common.

Roland explains, “PSPs provide the SEG install with a contract agreement for so many graphic change outs in order to guarantee print business without a large upfront cost for the install. The framing system still belongs to the PSP, but they lock in more print work over a longer timeline versus a one-time print.”

The end result is that fabric applications are a potentially explosive growth opportunity for wide-format printers with the capabilities to print them digitally. As the world of retail continues to lose ground to the convenience and ease-of-use of online shopping, retail brands will need to get more creative, not just with their branding, but also with the materials they use to create eye-catching and engaging experiences that draw consumers in. Digital textiles are a perfect medium for those applications, and shops that specialize in them will find it is not a wasted investment.

This article originally appeared in the March/April 2020 issue of Wide-format Impressions.
The Softer Side of Health Care

Digital textiles are having an increasing impact on how medical facilities are imagined

By Toni McQuilken, Senior Editor, Impressions Group, NAPCO Media

From furniture, to wallcoverings, to apparel, to signage, digitally printed textiles are on the rise. That is due in large part to the technology — from the printers, to the inks, to the software — finally reaching a tipping point where it can compete on both price and quality, but it is also due to the creative efforts of some of the pioneers of the space, pushing the limits of where and how digital textiles can be used.

One area in particular where digital textiles are already making inroads and are poised to see a massive surge in growth over the next few years is in and around health care.

Hospitals, clinics, doctors’ offices, and other health-related facilities have long strived to balance a clean, sterile environment that won’t impact the sometimes delicate systems of the patients who pass through the doors with a desire to feel warm and welcoming, and offer comfort to those who are experiencing pain, uncertainty, and stress. Everything used in these environments, from the paint on the walls to the fabrics in the curtains must be washable, cleanable, and designed to combat germs and bacteria as much as possible. For that reason, the options have traditionally been fairly limited in terms of what can and can’t be used.

“It’s been proven that a warm, pleasing environment helps aid in the healing of a patient. Because of this we have tried to make our patient rooms feel warmer, more appealing,” notes Larry Mills, manager, Printing Services, the in-plant print shop for Regional Health in Rapid City, S.D. “So, it’s now a system-wide thing at various hospitals and clinics trying improve the patient and family experience; we are trying to make them more appealing, and not just a cold, intimidating hospital room.”

With the rise of digital technology, the options for where and how to provide that warmth have already begun to expand, with the selection getting wider all the time. Textiles, in particular, are seeing a surge because new coatings not only make it easier to print vibrant, colorful pieces, they also bring a range of new features such as antibacterial elements to the picture. Paired with digital’s ability to print whatever a facility might want or need, on demand, with little to no turn-around time needed, and it is easy to see why these applications have been among the earliest to embrace the new technologies.

A Perfect Marriage

Kristen Dettoni, the founder of Design Pool, an agency dedicated to helping interior designers connect with printers to create personalized products and spaces — including custom textiles — notes that just in the past five years, the range of substrates she has seen come to market has increased dramatically. Faux leathers, which are a type of vinyl, in particular, she notes, have seen demand increase as much as 25%.

“These materials are fairly easy to print on,” says Dettoni, “they are flat, compared to a woven or textured material. It’s perfect for health care because it can be easily wiped down, and doesn’t absorb fluids. We’re getting a lot of interest in using it for upholstery, so that’s where I’m seeing the initial point of interest.”

From there, she notes, many health care facilities then see the power of digital printing, and begin to look for other areas where it can be deployed. Digitally printed privacy screens around beds, for example, is another application that is starting to gain traction.

“Traditionally, [privacy curtains] were woven fabric, with yarns then died to create patterns, then sewn to a mesh and hung on a ceiling track,” says Dettoni. “There were not a lot of printed wovens in the industry. I think this was due to the traditional method of heat transfer paper, which would require minimum orders of 500-600 yards of paper with a short shelf life, which was too much of an inventory risk for a company.” She points out that is changing, however, giving the example of Tana-Tex Inc., which has produced a knitted product with the mesh already included, eliminating a step and providing a product that is print-ready. "Tana-Tex’s genius is the knitted substrate… [which makes] the design seams more seamless, and any design can be printed.”

“The innovation is there,” she continues, “and the innovation with printing has really helped as well. All privacy curtains need to withstand high washing temperatures for laundering, and the latest technology on digital printing dyes has made this possible. Whatever they’ve done with the inks for things like bleach cleanability is really changing the market.”

But the opportunity for PSPs to get into this vertical goes beyond just the waiting room chairs or the privacy curtains. Wallcoverings is another strong growth area. At a digital textile printing summit in Orlando last summer, Scott Minette, president, Image Mill, a graphics company based in Monroe, Wash., related a project his company was involved in where they replaced the graphics in the elevator banks for a children’s hospital. “That was one of our earlier dye-sub projects,” he says. “We jumped in with both feet and figured it out.”

For the project, he notes, they had to use a more rigid material for the wallcoverings than the traditional fabrics used in dye-sub applications because it was anti-microbial and could be easily cleaned. That required some trial and error in terms of figuring out how the material

Decorative window graphics printed on semi-transparent help make patient rooms more inviting.
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This article originally appeared in the November/December 2019 issue of Wide-format Impressions.

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TVF Looks to the Future
Brian Vieweg, home textiles program manager at TVF, will walk viewers through the changes the company has undergone in recent years, and where it is going next.

Founded in 1974 as Top Value Fabrics, the business became an employee-owned company via an ESOP (Employee Stock Ownership Plan) in 2010. It then rebranded this year to TVF as it has become more than just a fabric company, serving the industrial, apparel, print media signage, and home décor verticals, just to name a few.

One space the company is seeing high growth opportunities is in apparel. In particular, the company prides itself on the consistency of its product — yarn selection, processing, weaving, knitting, how the fabric is finished, and how it is packaged and delivered are all important steps that never change, because that ensures the quality and regularity of the product. This means that when reordering a fabric, it will be the same as what was purchased previously — no matter how much time has passed between orders. Some highlights in the apparel fabric line include:

- **REPREVE 100% Recycled Microfiber Jersey** — winner of a PRINTING United Alliance 2020 Product of the Year award — is made from recycled plastic bottles that is breathable, moisture wicking, and performs well.
- **The Legging Fabric** is 92% recycled material, with 8% spandex for a comfortable fit.
- **The Woven Fabric** is 90% polyester with 10% spandex, which makes a great shirt material, with plenty of lateral movement, and is water repellant, making it a great choice for activewear.
- **Colorado Light Fabric** is engineered Polyux Polyester Fiber with a cotton feel, that provides moisture wicking and great print quality.
- **Warped Knit Polyester Spandex** is perfect for tight compression tops, or activewear such as swimsuits, as it gives a UPS 50 protection from the sun.
- **Jennifer Fabric** is an 88% polyester with 12% lycra, with has the best stretch and recovery of all the fabrics.
- **Finally, the company has a Microban option that kills the bacteria that causes odors or can discolor a fabric over time. It has been used on many of the fabrics above with great success for COVID-19 mask applications as well.**

Learning More about the HP Stitch Product Line
Tom Wittenberg, industry relations and events manager, North America; and Jeremy Pilcher, textile printing solutions architect, Americas, HP, joins the PRINTING United Digital Experience viewers from the company’s demo center in Alpharetta, Ga., to talk about the HP STITCH line of digital textile printers.

The HP Stitch S1000 is a 126" dye-sublimation printer ideal for medium and large PSPs to boost production of textile applications in the soft signage market, including backlits, frontlits, and interior décor such as curtains, upholstery, and sofas. It reaches reaching a maximum production speed up to 220 sqm/hr, and backlit speed up to 130 sqm/hr, and provides 1,200 native dpi.

The HP Stitch S300 holds the first user-replaceable printhead, resulting in reduced downtimes and service costs. It was designed specifically for new-to-dye sublimation professionals, prototyping departments, and growing print providers.

The HP Stitch S500 enables predictable dye-sublimation color and less media waste for production environments. With symmetrical 2xCMYK printhead configuration and Optical Media Advance Sensor, this 64" printer allows for saturated and reliable one pass mode for true top speed. The HP Stitch S500 was designed specifically for high production sites.
Kornit Highlights the Presto DTG System
Kornit takes this opportunity to walk PRINTING United Digital Experience viewers through its Presto direct-to-fabric system, which provides a complete on-demand solution for printing, softening, and drying textiles in a single step. It eliminates the need for pre- and post-treatment of fabric, and allows for high-quality printing on a broad range of fabric types and applications. The Kornit Presto does not consume water in the printing process, making it the most environmentally friendly solution available for direct-to-fabric textile printing today. The system uses NeoPigment Robusto, which provides above-industry-standard wash and rub results, and exceptional color fastness.

The Kornit Presto solution suits a wide range of business and application needs in a variety of industry segments, including fast growing segments within the on-demand fashion and home décor markets. It is available in multiple configurations, and able to print 450 sqm/hr.

Epson Demos the SureColor F10070
Timothy Check, senior product manager, Professional Imaging, Epson, will walk viewers through the company’s brand new SureColor F10070 Dye-Sublimation print system. Featuring four 4.7” PrecisionCore printheads and a new hot-swappable ink system, the printer delivers continuous roll-to-roll performance at production speeds up to 2,700 sq.ft./hr. An ideal solution for print shops looking to fulfill large orders, it consistently produces high-quality, bright textiles for fashion, sports apparel, home décor, soft signage, and more.

Leveraging the UltraChrome DS ink technology, the SureColor F10070 is the first Epson printer to feature a hot-swappable ink system that automatically switches from an empty ink pack to a new ink pack mid-print for uninterrupted printing. The system reduces overall ink cost by more than 50%, and allows for longer print runs without user intervention. Touting a redesigned 9” touchscreen control panel, SureColor F10070 operators can see the image printing, monitor print, paper, and ink status, as well as understand environmental conditions for optimized print performance.

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Champagne for a warm, rich look. TVF Poly Linen

Poly Linen is a soft, durable 100% polyester fabric with a true linen look. Designed with low slubs optimal for digital printing, this fabric brings innovation to the digital home décor market. This durable fabric passes 65,000 cycles on the Wyzenbeek test, and exceeds all of the critical home décor certifications interior designers and design firms require. This includes all three FR certifications, as well as OEKO-TEX STANDARD 100 certification. Poly Linen is available in two colors — Ivory for vivid hues, and Champagne for a warm, rich look.

TVF Tsunami Stretch Polyester

Tsunami Stretch Polyester is a dynamic new warp knit polyester fabric with very soft hand and excellent opacity, providing precise image sharpness and vibrant color. This product is wrinkle-resistant with stable dimensional stretch. Applications for this printable fabric include retail displays, trade show graphics, and tension structures such as arches, towers, and funnels. Its flame resistant Tsunami yields outstanding color and image sharpness with direct disperse and dye-sublimation inks.

EFI Reggiani BOLT – Intertech Award Winner

The judges believe this single-pass inkjet textile printer has the potential to revolutionize the world of printed fabrics. With speeds up to 295 fpm and a 72” print width, it significantly raises the crossover point between digital and analog processes. The impressive print quality and the option to include analog stations allow customers to address their full range of design needs. It substantially reduces environmental impact compared to conventional textile printing processes.

Klieverik VERTEX

The Klieverik VERTEX has been designed for the efficient production of single piece Transfer Printing, but is also capable of roll-roll printing. With sharp edge definition, a compact design, and its oil filled heating drum, this calender is ideal for the multi-purpose print shop aiming at high quality. The machine is optimized for ease of operation, and is suitable for all kind of PES textiles.

TVF Glacier

TVF’s go-to fabric recommendation for all upholstery needs, Glacier uses a special polyester yarn that has a very soft, natural hand. This extremely durable fabric passes 100,000 cycles on the Wyzenbeek test, and exceeds all of the critical home décor certifications interior designers and design firms require. This includes all three FR certifications, as well as OEKO-TEX STANDARD 100 certification. Glacier is available in two colors — Ivory for vivid hues, and Champagne for a warm, rich look.
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