

# WhatTheyTh!nk

MAY/JUNE 2022

## PrintingNews

20 2022 Technology Outlook

62 It's Time to Get Amped  
for Amplify!

TOP  
100  
SMALL  
COMMERCIAL  
PRINTERS  
2022

WhatTheyThink | PrintingNews

# STRATEGIC FACTORY

#1 Small Commercial Printer

p.8



STRATEGIC  
FACTORY

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PRINTING  
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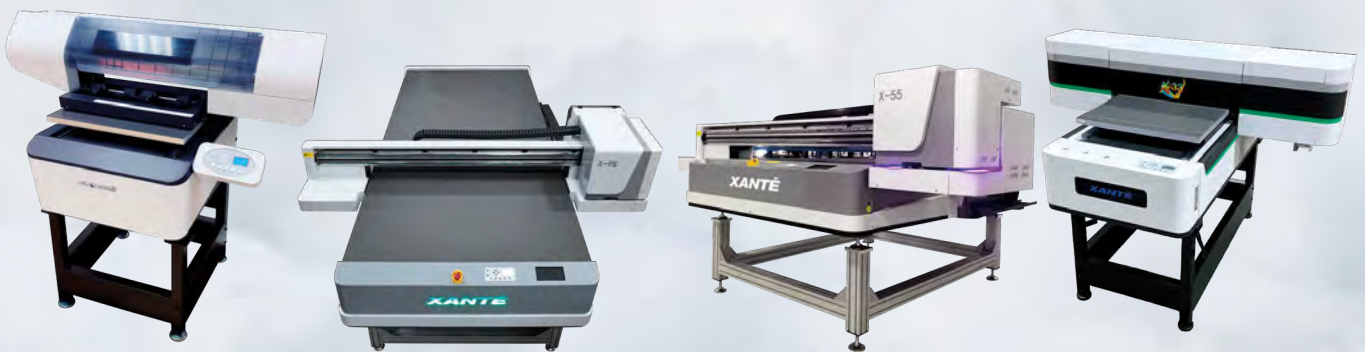


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**Eric Vessels**  
President  
[eric@whattheythink.com](mailto:eric@whattheythink.com)

# FOCUS ON FINISHING

**T**he finishing process is one that has garnered both increased attention as well as technological advancements. If you add digital embellishment, you might say these two areas are dominating the minds of marketing and communication professionals as they look to gain attention in an increasingly attention-deficit world.

WhatTheyThink has been covering these advancements for over 20 years, and when we began to organize our website into functional verticals, finishing was an obvious choice. Our Finishing Section Editor Trish Witkowski is famous for her series of videos called the “Super-Cool Fold of the Week.” She is, after all, the Chief Folding Fanatic!

Finishing is far more than folding and embellishment and has been a hot topic covered for some time by Trish and others. We look to cover this area more thoroughly with the addition of Kevin Abergel as a contributor. Kevin was most recently with MGI and is now President of Taktiful, a marketing consulting agency focused on digital embellishment technologies. See this issue for a great look at this area of the industry.

Finishing will also be a topic of one of our Technology Outlook webinar series that anchor our Technology Outlook resource pages. You can read more about finishing technology along with the other vertical areas in this issue.

Industry events have been hot in this area as well. In 2019, WhatTheyThink attended Horizon International’s “Think Smart Factory” event in Kyoto, Japan where several innovations were on display, most notably methods for automation. Of course, we have been attending Hunkeler Innovation Days for several years as the exclusive North American media partner. We look forward to getting back to Lucerne next year for this industry-leading event that highlights finishing innovations and the partnership between companies developing print engines and how they integrate with finishing solutions.

Speaking of industry events, I just returned from an engagement with Tecna to film customer sites for their upcoming “Spring Forward” virtual event in June, which we’ll moderate. Several customer sites in North America and Europe will be featured.

Also in this issue is an article on Amplify, an event created by the Association for PRINT Technologies (APTECH) and the Foil & Specialty Effects Association (FSEA) that will be in Minneapolis June 14-16. It is billed as a way to “bring finishing and embellishment to the forefront, showcasing the brands, products and processes raising the standard for foil and coatings, die cutting, folding and gluing, binding, direct mail and more.”

Also in this issue is our “Top 100 Small Commercial Printers,” celebrating the success of small commercial printing shops who earn up to \$25 million in annual revenue through an annual survey. Congratulations to all the winners! ●



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# WhatTheyThink!



VP, PUBLISHER  
Kelley Holmes  
kelley@whattheythink.com  
772-579-7360



PRODUCTION EDITOR & MANAGER  
Amy Hahn  
amy@whattheythink.com



EDITOR  
Jessica Taylor  
jessica@whattheythink.com



MANAGING EDITOR  
Richard Romano  
richard@whattheythink.com



SENIOR EDITOR  
Cary Sherburne  
cary@whattheythink.com



BUSINESS DEVELOPMENT  
Stephanie Papp  
stephanie@whattheythink.com  
602-639-0530



PRESIDENT  
Eric Vessels  
eric@whattheythink.com  
740-417-3333



COO  
Adam Dewitz  
adam@whattheythink.com

## CONTRIBUTORS

Kevin Abergel	Steve Johnson	Trish Witkowski
Lou Caron	Eric Lazar	Mark Vruno
Elizabeth Gooding	Pat McGrew	Warren Werbit
Joanne Gore	Heidi Tolliver-Walker	David Zwang

## CREATIVE SERVICES

Bobbi Burow, CreativityTank LLC  
bobbi.burow@gmail.com



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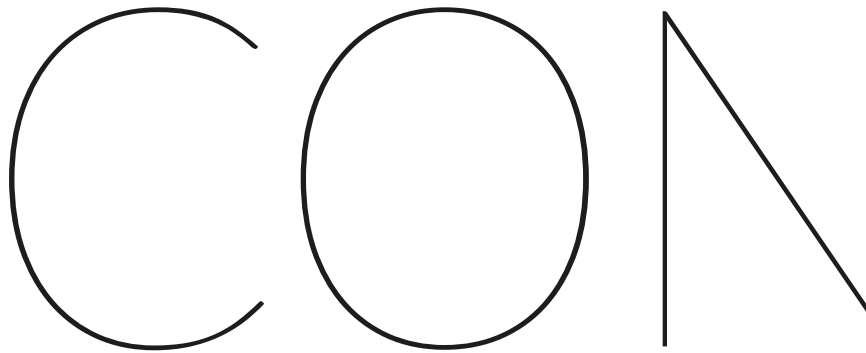
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## TOP 100 SMALL COMMERCIAL PRINTSHOPS

WhatTheyThink | Printing News annual small commercial printshop Top 100 Survey.

By Richard Romano

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WhatTheyThink

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# TOP 100 SMALL COMMERCIAL PRINTERS 2022

WhatTheyThink | PrintingNews

By Richard Romano

**E**ach year, *WhatTheyThink | Printing News* invites small commercial print business owners to participate in our Top 100 Shops Survey. The key word is “small.” The upper limit for participation at \$25 million in annual revenues.

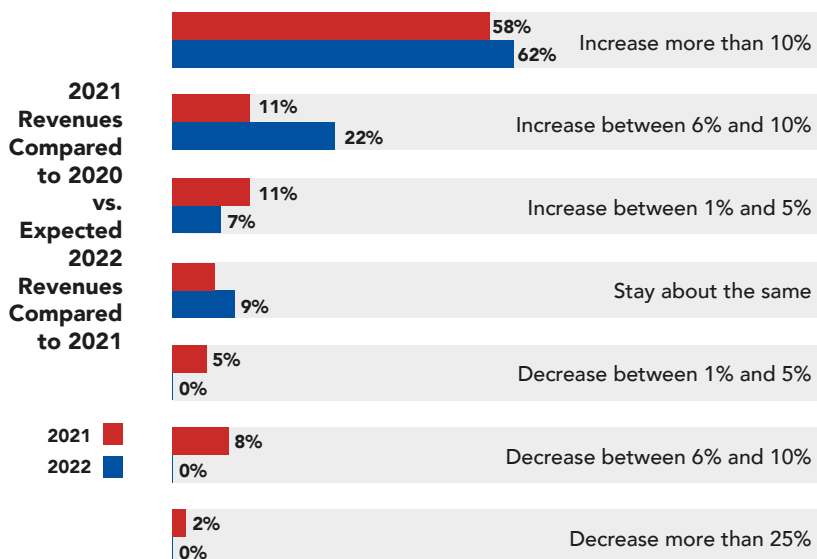
Our Top Shop this year came in at \$23.90 million. This year’s winner was also last year’s winner, when

they came in at \$21.32 million. Given their trajectory, it’s possible they won’t qualify next year—our loss is their gain.

In 2021, the shops included in our Top 100 list accounted for just under half a billion dollars in revenue—\$492,162,223, representing a 6% increase from 2020. In the year of Our Pandemic 2020, the Top Shops saw a 16% decline from 2019, so 2021 was very much a rebuilding year.

If we look at revenues for our top shops, 58% saw a 10%+ increase in revenues in 2021 from 2020, while 11% said 2021 saw a 6–10% increase over 2020 and a further 11% saw a 1–5% increase in revenues in 2021. Only 15% reported any decrease in revenues in 2021—a welcome change from 2020 when the majority of shops reported a decrease in revenues. (We won’t adjust for inflation.)

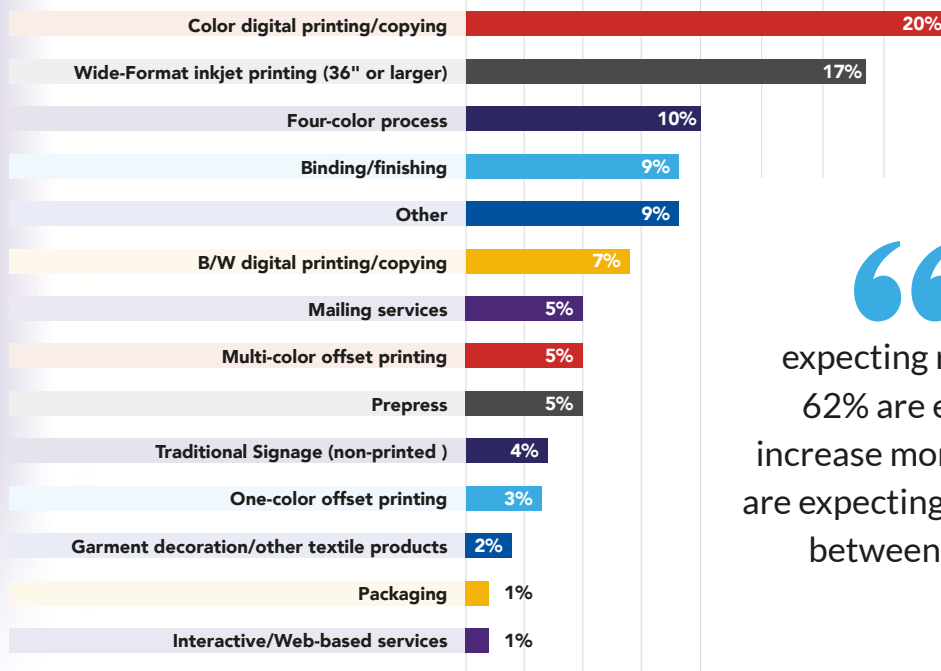
As for their expectations for 2022, hope springs eternal: no one





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## Applications as % of Revenue



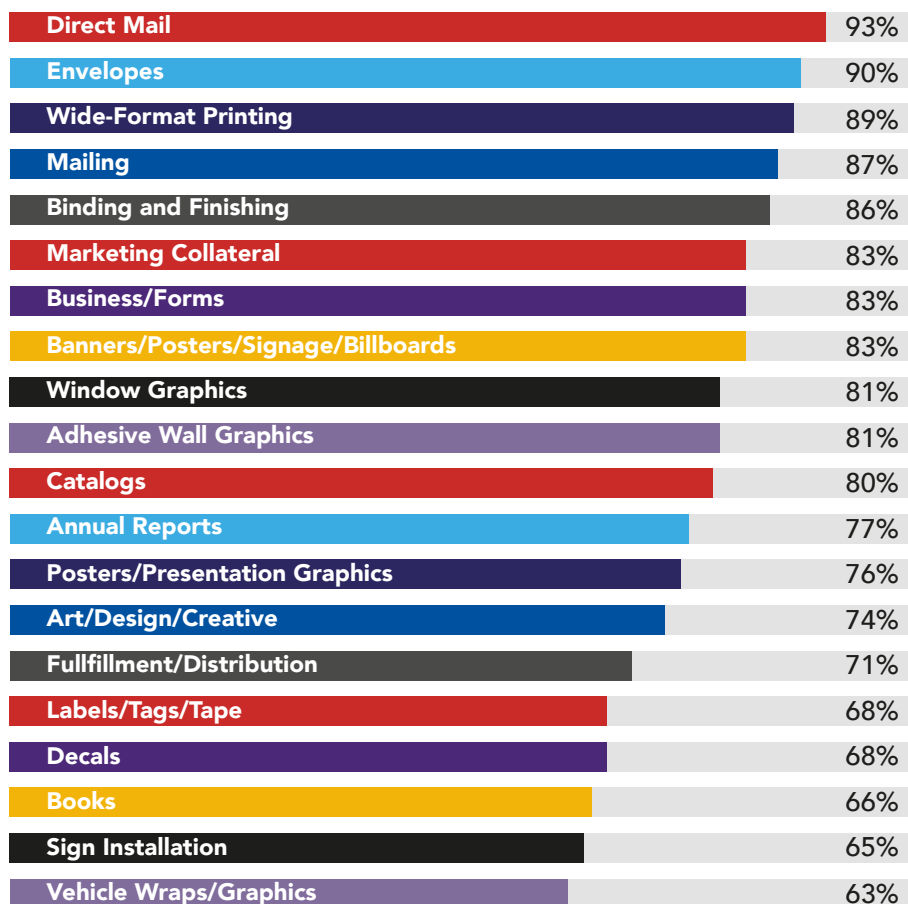
“ For 2022, no one is expecting revenues to decrease, 62% are expecting revenues to increase more than 10%, and 22% are expecting revenues to increase between 6% and 10%. ”

is expecting revenues to decrease, nearly two-thirds (62%) are expecting revenues to increase more than 10%, and 22% are expecting revenues to increase between 6% and 10%.

In 2020, the dominant issue was obviously surviving the COVID-19 pandemic, and the theme of last year’s Top Shops survey was the recovery. This year, the theme appears to be “generally back to normal.”

Our survey was conducted from March to May of this year, and the responses reflect an industry turning to new challenges—namely, getting supplies (paper especially), the cost of those supplies (i.e., inflation), and finding employees. Although COVID is not over—not by a

## Which of the following are produced at this location?



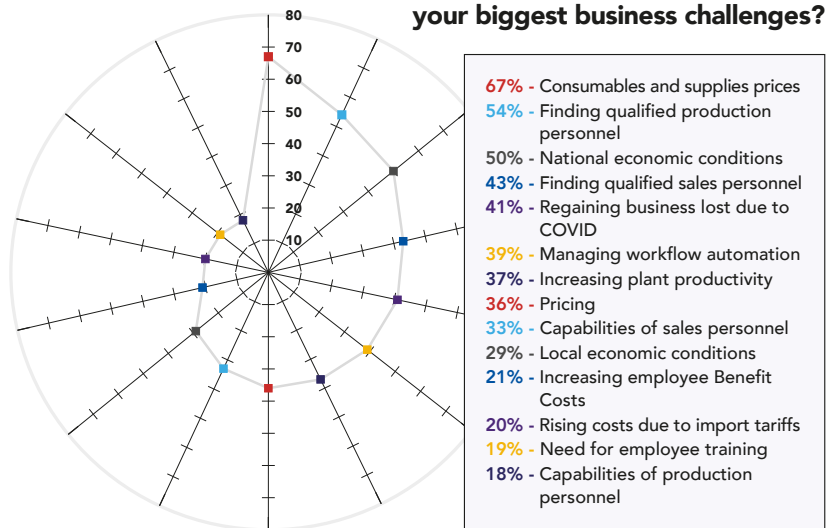
longshot—our Top Shops have more pressing issues.

**Demographics**

If you look at our list of Top Shops, you'll notice a large number are franchises—lots of Allegras, AlphaGraphics, Sir Speedys and PIPs. If you read our “Franchise Review” in the April 2022 issue, you know that franchises were well-positioned to fare better than average during the pandemic, given the support that a franchise network can provide, and the franchises came out of the pandemic stronger than ever.

It also has to be said that individual franchisees were encouraged by the Mother Ship to respond to our survey, whilst indie print businesses were a lot more difficult to wrangle. While we'd like to get a lot

**In the next 12 months, which of the following will be your biggest business challenges?**



more independent printer participation, we unfortunately don't have subpoena power.

The oldest company in our in our Top 100 this year is Hagerstown, Md.'s HBP, founded in 1903 (spoiler alert: more about them later). The newest company is AlphaGraphics Suwanee (Ga.), founded in

**In the next 12 months, which of the following represent your best new business opportunities?**



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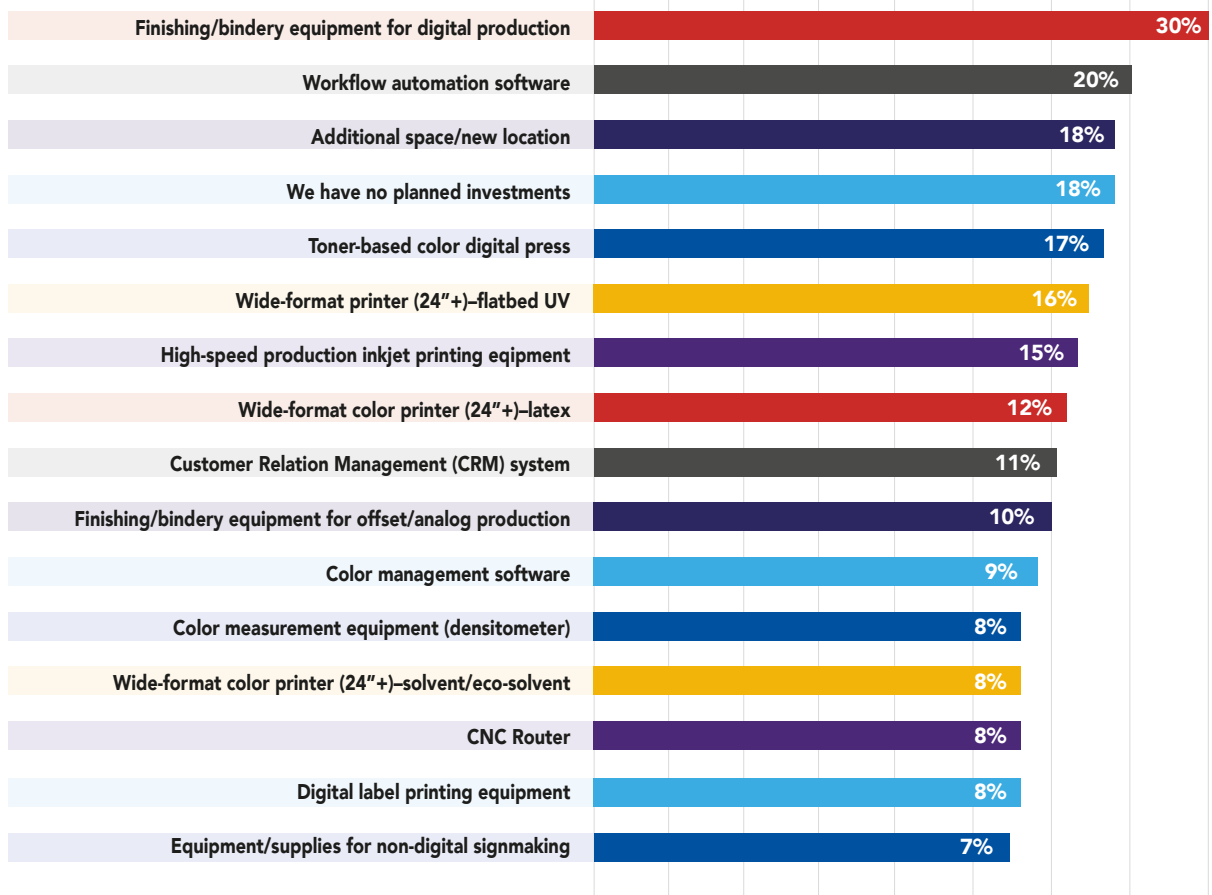
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## Which of the following investment items have you budgeted for and plan to acquire in the next 12 months?



2019. The median founding date for all companies in the Top 100 was 1989.

The majority of our respondents have one location, but at the high end, Salem Printing & Blueprint, Inc. in Salem, Ore., reported 21 locations. In the Top 10, 1.9 locations is the average (not that anyone has .9 of a location—although, these days, they very well may), and AlphaGraphics Idaho Falls, Ida., has 10 locations, having added two since last year.

In terms of employees, the average number of full-time and part-time employees in the Top 100 is 28.2; our Top Shop this year (Strategic Factory) tops the list at 146.

### Applications

Print businesses are becoming nothing if not more diverse in the kinds of applications they produce. When we look at applications as a

percentage of revenue, on average, color digital printing/copying accounted for, on average, 20% (it was 22% last year), followed by wide-format printing (17%, unchanged from last year). Four-color process (i.e., offset) accounts for 10% of revenues on average. A smattering of other applications fills out Top Shops' billings.

When we look at the specific kinds of things shops produce, we find a wide range of print products, from direct mail (produced by 93% of our Top Shops) and envelopes (90%), to wide-format printing (89%), mailing (87%), and binding and finishing (86%). Even 63% of our Top Shops did some kind of vehicle graphics—although a lot of these items may not account for an overwhelming percentage of overall revenues, they are still important parts of the overall product mix.

And none of this is to say that demand for these

items will remain static; in five years—or even next year—different products may take up more or less of a percentage of overall revenues. In a dynamic print market, each year's survey can only ever be a snapshot of a brief moment in time.

### Top Challenges

The industry has decidedly moved on from the COVID-related challenges we tracked in 2020. This year's top challenges—and none will surprise you in the slightest—are “consumables and supplies prices,” selected by 67% of our Top Shops, and “finding qualified

“ The industry has decidedly moved on from the COVID-related challenges we tracked in 2020. This year's top challenges are consumables and supplies prices. ”

production personnel” (54%). (Sales personnel are a little easier to find—only 43% of Top Shops were challenged by finding them.) “National economic conditions” was selected by 50% of our Top Shops, and “local economic conditions” by 29%—although you would think the latter would be more important than the former. Related

to the number one challenge, “pricing” is down at 36%—but that's up from 21% last year.

We note that “regaining business lost to COVID-19” is down to 41%—still significant, but a far cry from 76% in last year's Top Shops survey. Other production issues like increasing productivity and managing automation are also top-of-mind issues.

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### Top Opportunities

Although the challenges suggest an industry that has moved on from COVID, the opportunities describe one that is still dealing with the pandemic (as indeed we all still are, whether we want to admit it or not).

“Improving economic conditions” is still the number-one “opportunity,” but at 54% of Top Shops, is down from 71% last year—in large part because the economy is actually doing extremely well.

“Customers outsourcing more work to us”—a top Before Times opportunity—is this year tied with “national recovery from COVID-19” at 41%.

“Hiring new salespeople”—another old favorite—is at 39%, unchanged from last year.

“Automating production” is up 10 percentage points to 40%—it looks like shops are getting serious about pursuing automation, although what “automation” specifically means remains unclear.

A key to survival for many—be they Top or other shops—has been the diversity of product and service offerings. That was true before the pandemic was hammered home in 2020, and will remain true long after the pandemic is just a distant memory.

### Planned Investments

Our Holy Trinity of annual surveys—Business Outlook, Franchise Review, and Top 100—have all marched very much in lockstep pre- and during-pandemic, but this is the first survey that breaks ranks with some movement at the top of the Planned Investment list.

For a few years, “we have no planned investments” has topped this list, but that it’s down to 18% breaks with the usual trend.

Our top investment category is the ever-popular “finishing/bindery equipment for digital production” at 30% of Top Shops, ticking up one percentage point from last year.

“Workflow automation software” is up from 18% to 20%—an all-time high for this investment category, suggesting perhaps that the Top Shops are serious about automation.

“Additional space/new location is down one point to 18%, but last year we remarked that, at 19%, it was abnormally high. It’s possible

work-from-home has led shops/plants to downsize—or maybe acquiring new capabilities has led them to upsize. That would be a good thing to qualify when we conduct our fall Business Outlook survey.

### Moving On

With a few already noted exceptions, our three recent industry surveys—Fall Business Outlook, Franchise Review and Top 100—have tended to mutually validate each other. We would expect the Top 100 to show some differences, given that it is a snapshot of the “best of the best” rather than a broad industry cross-section. What these surveys confirm is that we are all wrestling with the same issues—but how they deal with them is the true measure of their success.

### This Year’s Winners

Congratulations to the winners of this year’s Top 100! Three of the Top Six were in our Top Six last year. Our six Top Shops (by 2020 sales) this year are:

- 1. Strategic Factory, Owings Mills, Md.**  
—\$23,901,266
- 2. HBP, Inc., Hagerstown, Md.** —\$22,100,000
- 3. Yunker Industries, Elkhorn, Wis.**  
—\$22,000,000
- 4. Allen Printing Company, Nashville, Tenn.**  
—\$19,950,000
- 5. Allegra Asheville, Asheville, N.C.**  
—\$18,642,508
- 6. Cedar Graphics, Hiawatha, Ia.** —\$17,000,000

### #1 Strategic Factory

Strategic Factory (<https://strategicfactory.com>) was founded in 1999 by Keith Miller as a two-person quick print franchise but has grown to a 40,000-square-foot production facility with nearly 130 employees. The company offers commercial printing, as well as signage, vehicle graphics, branded apparel and promotional items, and a full range of



creative and design services.

This is the second win in a row for Strategic Factory, and their \$23,901,266 sales in 2022 represents a 12% increase from last year. During 2021, they underwent a rebrand and enhanced customer communications, citing as top opportunities for 2022 “helping customers integrate print and non-print marketing campaigns” and “using marketing automation for our business (like HubSpot, Eloqua, Marketo).”

They are looking at expanding into packaging, as well as continuing to automate production.

### #2 HBP, Inc.

Founded in 1903, HBP ([hbp.com](http://hbp.com)) is one of the oldest companies in this year’s Top 100 and the oldest in the Top 10. HBP has two locations—Hagerstown, Md., and Falls Church, Va.—and 151 employees. Revenues for 2021 were \$22,100,000, and while HBP didn’t participate in last year’s Top Shops survey, they were our #3 Top Shop in 2020.

A lot of HBP’s work is with associations, which involves trade shows and other events, which came to a standstill in 2020 and much of 2021. For 2022, HBP is looking to acquire another company and continue the expansion of its digital capabilities, which had started back in the Before Times, by investing in high-speed production inkjet equipment.



### #3 Yunker Industries

Yunker Industries ([www.yunker.com](http://www.yunker.com)) is the third oldest company in our Top 10, founded as Yunker Sign & Display in 1948 by Warren and Mary Helen Yunker, and is headed today by Kari Yunker.



Initially a sign shop, the company added more and more retailers to its client base and began producing permanent and semi-permanent

graphics, branding elements and display fixtures, and wayfinding signage. Today, Yunker is a retail marketing services organization, handling all aspects of wide-format and signage, prototyping, design, fulfillment and installation.

Yunker’s sales for 2021 came in at \$22,000,000, up from \$19,500,000 in 2020, which had put them at #2 on our Top 100 list last year. The company has one location (Elkhorn, Wis.) and 83 full-time employees. Yunker is looking to continue to grow in 2022 by adding digital printing equipment and expanding their textile/fabric printing capabilities.

### #4 Allen Printing Company

Returning to the Top Five this year—they were number six last year—is Allen Printing Company ([www.allenprinting.com](http://www.allenprinting.com)), which is the second

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# SPECIAL FEATURE — Top 100

Rank	Company Name	Management	City, State	Year Founded	No. of Locations	Total Employees (FT+PT)	2021 Sales
1	Strategic Factory	Keith Miller	Owings Mills, MD	1999	3	146	\$23,901,266
2	HBP, Inc.	John Snyder	Hagerstown, MD	1903	2	151	\$22,100,000
3	Yunker Industries	Kari Yunker	Elkhorn, WI	1948	1	92	\$22,000,000
4	Allen Printing Company	Shannon & Paul Heffington	Nashville, TN	1931	2	140	\$19,950,000
5	Allegra	Dave Campbell, Cindy Conner	Asheville, NC	1998	2	30	\$18,642,508
6	Cedar Graphics, Inc	Salma, Humza & Charlie Igram	Hiawatha, IA	1986	2	95	\$17,000,000
7	Speedy CPS, dba Alphagraphics	Lynn Nelson	Idaho Falls, ID	2006	10	110	\$14,805,000
8	Allegra	David Kovacs	Cranbury, NJ	1990	3	62	\$11,795,979
9	Allegra Marketing*Print*Mail	Michael Marcantonio	Plymouth, MI	1978	2	58	\$11,205,930
10	Haig Graphic Communications	James, Steven & Aram Kalousdian	Hauppauge, NY	1943	1	40	\$10,997,464
11	SS Whittier LLC	George Coriaty	Whittier, CA	1979	1	30	\$10,733,000
12	Dynamark Graphics Group	Scott & Tom Fulner	Indianapolis, IN	1972	2	58	\$9,541,256
13	AlphaGraphics	Chuck Stempler	Seattle, WA	1991	1	56	\$9,505,017
14	Thompson Print & Mailing Solutions	David Thompson	San Antonio, TX	1964	2	53	\$8,287,990
15	The H&H Group	Mary Kohler, Phil & Cam Huepenbecker	Lancaster, PA	1973	2	40	\$6,800,000
16	AlphaGraphics on University	Mike Sparaco, Darin Osborne	Tempe, AZ	1988	1	38	\$6,754,692
17	Integra	Rick, Garren & Tate Richter, Gene Egan	Crestwood, IL	1989	2	20	\$6,676,000
18	PIP Printing # 500	Shelley Bramstedt, Jan & John Tatham	Anchorage, AK	1979	1	41	\$6,548,084
19	Paragon Press	Macy Flash	Shreveport, LA	1976	1	32	\$6,325,000
20	PDC Graphics	Jim & John Rosenthal, Carl Piccari, Jr	Southampton, PA	1997	1	40	\$5,950,000
21	AlphaGraphics in the Cultural District	Bill & Clare Meehan, Sarah Meehan Parker	Pittsburgh, PA	2000	1	24	\$5,800,000
22	S2K Graphics	Franke Foodservice, Dan C. Pulos, Philip Garcia	Chatsworth, CA	1989	1	25	\$5,600,000
23	Southeast Mail Service	Jeff Fraley	Lexington, KY	2007	2	30	\$5,560,000
24	AlphaGraphics #011	Larry Furlong	Phoenix, AZ	1981	1	29	\$5,315,564
25	Sir Speedy	Eileen, David & Leila Rosenzweig	Sarasota, FL	1987	1	25	\$5,118,068
26	American Graphics Printing Co.	Bob Hindman	Clinton Township, MI	1984	18	18	\$4,774,065
27	Graphic Creations, Inc.	Jim Caughorn, Jim Caughorn Sr, Amy Stewart	Knoxville, TN	1987	1	25	\$4,465,867
28	PIP Printing/PrintMyStuff.com	Justin, Samuel & David Tracy	Riverside, CA	1968	2	19	\$4,407,921
29	The Sign Dude Inc.	Brian Morse, Jim DeBoer	Medford, OR	1993	1	34	\$4,217,000
30	Allegra Print & Imaging	Darwin & Lisa Buehler	Little Rock, AR	1991	1	21	\$4,214,141
31	Yotta Sky Group, Inc	Jose & Carmen Gutierrez	Miami, FL	2012	3	32	\$4,150,000
32	Plum Grove Inc	Peter & Kara Lineal	Cary, IL	1980	1	29	\$4,130,600
33	PIP Marketing Signs Print	Chris Cochran, Shane Parker	Peoria, IL	1978	2	28	\$4,081,891
34	Sir Speedy	Steve & Emily Albritton	Tampa, FL	2017	1	18	\$4,049,047
35	Braintree Printing	Jose Tafur	Braintree, MA	1989	1	10	\$4,020,995
36	Impressions Printing	Jeff Summerford	Oklahoma City, OK	1996	1	42	\$3,911,548
37	Alphagraphics	Jim Bright	Franklin, TN	2012	1	21	\$3,847,460
38	Graphtech	Jon Williams, Sarah DiCello	Harrisburg, PA	1982	1	31	\$3,798,000
39	AlphaGraphics #54	Sherry & Tony Perry	Dallas, TX	1985	1	16	\$3,724,514
40	More Business Solutions	Denise Roath	Peachtree Corners, GA	1985	2	35	\$3,700,000
41	PIP Marketing Signs Print	Robert Pelzek	East Longmeadow, MA	1976	1	20	\$3,617,160
42	Econo Print Inc.	Jim Berry	Billings, MT	1969	2	18	\$3,577,704
43	Minuteman Press	Michael Orr	Boca Raton, FL	1978	1	22	\$3,543,000
44	Bethlehem Business Forms, LLC	Frederick J. Fenselau, Jr.	Bethlehem, PA	1981	1	29	\$3,533,962
45	K-B Offset Printing, Inc.	R. J. Caravan	State College, PA	1973	1	34	\$3,512,046
46	AlphaGraphics #371, #600, #629	Jane Harvey	Austin, TX	1994	3	23	\$3,400,000
47	Professional Print & Mail, Inc.	Laurie Wax, Michael Carlile	Fresno, CA	1985	1	28	\$3,381,850
48	Allegra Marketing, Print, Mail	John Fergusson	Richmond, VA	1991	1	23	\$3,338,000
49	Sir Speedy	Edward Borash	Boston, MA	1979	1	14	\$3,200,000

Rank	Company Name	Management	City, State	Year Founded	No. of Locations	Total Employees (FT+PT)	2021 Sales
50	Moran Graphics Inc.	Richard Moran	Chicago, IL	1993	3	24	\$3,154,750
51	Sir Speedy Printing & Signs	Kathy Morgan	Irvine, CA	1979	1	13	\$3,146,603
52	AlphaGraphics	Carmine & Victoria Camerato	Boston, MA	2002	3	17	\$3,139,323
53	AlphaGraphics #283,#207, #777, #754	Ilene & Michael Stroh	Allentown, PA	2013	4	13	\$3,125,000
54	Allegra Print • Sign • Design	John Flynn	Sterling, VA	1988	1	15	\$3,117,964
55	Allegra	Patrick & Betsy Edwards	Tucson, AZ	1990	1	16	\$3,115,113
56	AlphaGraphics	Grant Richey	Bountiful, Utah	2007	1	17	\$3,050,503
57	AlphaGraphics	Owen Andrews	Garner, NC	2011	1	21	\$3,038,687
58	TruColor	Sallie Gold	Greenville, SC	1980	1	16	\$3,021,000
59	Allegra	Paul Kessen	Naples, FL	2009	1	16	\$3,005,000
60	Bickers Printing	John & Karen Bickers	Madison, WI	1998	2	22	\$2,941,715
61	YellowDog	Jenny & Dan Mulligan	Denver, CO	2005	1	26	\$2,912,000
62	Allegra	John Ferrari	San Diego, CA	2006	1	9	\$2,900,000
63	AlphaGraphics	Jerron Hale	Layton, UT	2002	1	16	\$2,897,117
64	Alphagraphics	Rich Schepler	Charlotte, NC	2015	2	13	\$2,791,136
65	Sir Speedy	Lloyd Newton	Raleigh, NC	1990	1	16	\$2,723,597
66	Allegra Marketing	Dave Muhleck	Okemos, MI	1990	1	15	\$2,711,668
67	Salem Printing & Blueprint, Inc.	Brenton & Clarence Field	Salem, OR	1946	21	21	\$2,657,413
68	Color World	Jeff & Mike Burgard	Bozeman, MT	1967	1	17	\$2,653,216
69	PIP Triad & Triad Signs	Jimmy Brumley, Mark Hildebrandt	Burlington, NC	1983	2	22	\$2,615,016
70	Sir Speedy Printing	Jody Weber Shaw, Arthur & Dannie Weber	Winston-Salem, NC	1974	2	20	\$2,600,000
71	AlphaGraphics	Joel Kurian	Houston, TX	1981	3	20	\$2,535,734
72	Allegra	Clyde Moses	Show Low, AZ	2006	1	14	\$2,453,055
73	AlphaGraphics #146	Frank Leone, David Stowe	Stamford, CT	1988	1	8	\$2,435,206
74	Allegra Marketing Print Web	Michael & Jeanne Grant	Vancouver, BC	1994	1	15	\$2,383,721
75	Allegra	Eric, Ben & Bruce Van Kerckhove	Cedar Rapids, IA	1981	1	18	\$2,382,599
76	Streeter Printing, Inc.	Adrienne & Jack Streeter	San Diego, CA	1980	1	15	\$2,363,500
77	AlphaGraphics	Louis Malooley	Atlanta, GA	2010	1	13	\$2,315,778
78	AlphaGraphics #291	Steve Adams	Mesa, AZ	1990	3	15	\$2,283,306
79	Alphagraphics	Butch Clarke	Rockwall, TX	2014	1	15	\$2,278,147
80	Documents on Demand	Raymond Mantyla	Worcester, MA	2010	2	11	\$2,233,056
81	Sir Speedy	Michael LeVangie, Laurence Nye	Orlando, FL	1980	2	10	\$2,196,047
82	AlphaGraphics	Andy Selcho	Sandy, UT	1996	1	15	\$2,170,465
83	Foote Printing	Michael & Steven Duhr, Thomas F. Foote	Cleveland, OH	1907	1	13	\$2,168,404
84	Alohagraphics	Pratul Kumar	Carrollton, TX	1994	1	23	\$2,100,000
85	Sir Speedy BNA/Team B LLC	Louise & Charley Bairnsfather	Nashville, TN	1991	1	12	\$2,077,375
86	PIP Marketing Signs Print	Ray & Kay McNaught	Sacramento, CA	1986	1	9	\$2,070,061
87	AlphaGraphics	Brandon Bagley	Chandler, AZ	2007	4	12	\$2,068,255
88	XPress Printing	Jeff Swales, Tony Meyer	Sisters, OR	1989	1	17	\$2,042,312
89	AlphaGraphics	Pratul Kumar, Jim Hewell	Carrollton, TX	1964	1	22	\$1,998,224
90	Sir Speedy Westbury	Jack, Evan & Brandon Bloom	Westbury, NY	1992	3	12	\$1,900,655
91	Pinney Printing Company	Charles Arp, Alvin Pinney	Sterling, IL	1910	1	15	\$1,889,003
92	AlphaGraphics	Erik Shultz	Elkhart, IN	2007	2	9	\$1,836,827
93	Allegra	Todd Hinson	Rocky Mount, NC	1990	1	10.5	\$1,835,250
94	Master Printing Group, Inc.	Jeremy & Frank Dobos	Berea, OH	1928	2	14	\$1,800,000
95	Harmonic Media	Tyler Lindvall	Englewood, CO	2007	1	12	\$1,750,000
96	Allegra Marketing Print & Mail	Howard, Lisa & Florence Simson	Vaughan, ON	1980	1	10	\$1,658,000
97	Allegra Marketing-Print-Mail	Roger & Patty Stewart	Coeur d Alene, ID	1987	1	12	\$1,620,000
98	AlphaGraphics	Ryan & Angela Paulsrud	Middleton, WI	1980	1	12	\$1,559,160
99	Piedmont Press & Graphics	Holly & Tony Tedeschi	Warrenton, VA	1987	1	14	\$1,511,667
100	Highlight Printing	Merabi Pruidze, Patty Cameron	Minneapolis, MN	1985	1	9	\$1,420,000

oldest company in our Top 10 having been founded in Nashville in 1931. Being able to jump on new opportunities as they present themselves has been a key ingredient in Allen



Printing’s success, even before the pandemic, but especially during. Preparing for anticipated problems like paper shortages helped in 2021.

Sales in 2021 came in at \$19,950,000—an increase of 33% from 2020 sales.

“2021 was a really weird year,” said President Paul Heffington. “Sales seemed to be there because of the economic recovery from the previous year’s setback, but it seemed like every time you turned around there was a new hurdle to jump. Mainly inflation and paper shortages.”

One reason they grew so much last year was that they bought as much paper as they could.

“Even though this shortage sucks, it did not blind-side us.”

Massive price increases did catch them a little off guard.

“Not that we weren’t expecting prices to go up, we just weren’t expecting the prices to almost double in a 12-month period,” Heffington added.

The second secret to their success was increased pricing, which thus increased sales.

“To try and continue this success and growth into 2022 and beyond, we will continue to bend over backwards to provide that awesome service in an atmosphere that has the whole industry frustrated. At some point, you have to believe that things will get back to some semblance of normalcy.”

**Correction:**

The summary data table that accompanied the Print Shop Franchise Review feature in our April issue misstated the sales of Franchise Services’ (Sir Speedy, Pip Printing, Signal Graphics) highest-revenue center. The table below is correct. WhatTheyThink | Printing News regrets the error.

Franchise	Total shops in system	Corporate-owned shops	How many shops in North America	Average sales per shop	Average investment to open new shop	System-wide sales	Highest Revenue Shop
Alliance Franchise Brands (Allegra Marketing Print Mail, KKP (Canada), Insty-Prints, American Speedy Printing Centers)	247	2	247	\$875,186	\$27,861-\$378,185	\$214,395,601	\$10,509,401
AlphaGraphics	265	2	242	\$1,007,214	\$264,000-\$364,000	\$260,963,000	\$7,928,605
Fortusis, LLC (Kwik Kopy Business Centers, Franklin's Printing, The Ink Well)	37	2	37	\$318,730	\$238,875	\$11,792,996	\$1,187,352
Minuteman Press International	959	0	788	\$610,661	\$75,500-\$182,917	\$442,695,806	\$7,439,327
Sir Speedy, Pip Printing, Signal Graphics	208	0	208	\$990,000	\$290,000	\$206,000,000	\$13,000,000
<b>Totals*</b>	<b>1,716</b>	<b>6</b>	<b>1,522</b>	<b>\$760,358</b>	<b>\$221,277</b>	<b>\$1,135,847,403</b>	<b>\$6,443,073</b>

\*All numbers are totals, save for average sales per shop, average number of employees, and average investment to open a new shop, which are averages.



### #5 Allegra Asheville (N.C.)

Returning to the Top Five for the second year in a row is Allegra Asheville ([www.AllegraAsheville.com](http://www.AllegraAsheville.com)). Allegra Asheville was founded in 1998 as Mail Management Services and became an Allegra franchise in 2015. Its client base runs the gamut of businesses in the Asheville area.

Sales in 2021 came in at \$18,642,508, a 15% increase from 2020.

“The Team at Allegra Asheville had a very successful 2021,” said Owner and President Dave Campbell. “In fact, it was the best year in the 24-year company history. We have a very motivated, flexible and highly competent group that seeks challenges on a daily basis that make us better. We have had a fun year that has been very rewarding and expect it to continue into 2022.”

Allegra Asheville saw an uptick in direct mail production in 2021.

“That corresponds to growth in our printing, data services, and finishing departments,” added Campbell. “We handled the increased volume very easily and also had the support of additional Allegras within the network to assist client needs—kudos to them.

“2022 is shaping up to be a solid year for us from a sales perspective. We have already enhanced our production

capacity and are landing additional work that fits us best. We hope the entire industry has shaken off the pandemic doldrums and are having better

business in 2022.”

*Thanks to everyone who participated in our survey, and congratulations to this year’s Top Shops! ●*



**“Hiring ColorCasters was the best thing we ever did. They helped transform our mindset and processes from an offset to a digital shop. Absolutely worth the time and money invested.”**

Eileen Rosenzweig, Owner of Sir Speedy Sarasota  
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# OVERCOMING CHALLENGES THROUGH EFFICIENCY

2022 Tech Outlook

By Elizabeth Gooding

**T**he markets that first adopted inkjet, customer communications and direct mail, were quickly transformed through the ability to streamline operations, combine jobs of many sizes and eliminate waste. The effectiveness of inkjet is based on the ability to impact the complete manufacturing process for printed products.

“If the vendors get the offer right, printers will invest,” said Sean Smyth, print technologist and consultant with Smithers. “In books, they have largely won by offering more efficient book manufacturing rather than just book printing. For example combining workflow to batch titles, printing then finishing automatically to deliver book blocks for binding. Cost comparison of manufactured books rather than printed sections makes economic crossover at higher volumes against litho. When a print product is digitally manufactured it makes pure print cost comparison less of a barrier.”

As economic pressures and a growing desire for personalization drive down the size of individual order sizes across markets, the manufacturing efficiencies of inkjet are further amplified.

“The business model of printing is changing,” said Marco Boer of I.T. Strategies. “It’s no longer about better economies of scale, it’s about adding value on fewer pieces printed.”

Boer also noted that this change is very disruptive because it is not easy to change business models.

Labor and supply chain shortages are conspiring to push printing companies toward changing their business models while placing further disruption in their path.

Digital and offset print markets are suffering from

severe paper shortages as mills convert from production of printing grades to packaging materials.

Labor is also in short supply. As the effects of COVID-19 receded and print volumes rebounded, staffing levels did not. Some companies have reported that they are trying to produce 100% of the volume with 60% of the staff as compared to 2019. This has resulted in high levels of overtime as well as a higher base wages.

Boer said that the big breakthroughs in inkjet technology today are “not on technology - but on the amplification of labor savings on inkjet versus offset. As labor has become difficult to find and expensive, switching from offset to digital has a fast payback.”

## Paper pushes the margins.

Paper producers and distributors are rationing supply across their existing customers. Paper prices are rising, in some cases as frequently as once per quarter. European mills, often considered a safety valve for North American markets, are suffering their own supply shortages and are further hampered by the high costs of shipping to U.S. ports and 30- to 90-day backlogs in getting containers through the ports.

In January 2022, the busiest container ports in the U.S. had a backlog of 109 ships waiting at sea to unload. In March, the backlog of vessels dropped to 66, but Sea-Intelligence projects that the backlog may increase beyond the January numbers in the April to May time frame with the potential to top 150 vessels.

The catalyst for these backlogs is primarily a shortage of warehouse capacity and overland transportation with dock labor also in the mix. The impact to the supply chain is massive with every



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day at sea adding to the cost, and the competition for scarce warehouse and transportation resources driving prices higher.

The current, unpredictable nature of paper supply has forced many companies to work with what they can get, often taking different web widths, finishes or converting their own sheets or web widths to get the work out the door.

In an inkjet environment, this may require testing and qualify new papers “on the fly.” It can take several hours to profile each new paper and tune it to the press, adding expense not to mention using up some of the precious paper in the process. Not all companies have staff in house who are qualified to perform this level of color management work, driving further expense for consulting support.

The paper shortage is particularly grim for inkjet formulated papers. As it happens, one of the major areas of investment by inkjet OEMs over the past few years has been expanding substrate compatibility.

“There has been a continuing improvement in quality on standard offset stocks, delivering brighter colors and heavier coverages with reasonable drying,” Smyth said.

For those who are not using presses that are compatible with offset papers, there is the option to prime or pre-coat their own papers off line. Some companies choose this option in order to add flexibility, control costs by only using pre-treatment based on the quality requirements of the particular job.

## Rolling with the Changes

Despite these constraints, overall inkjet pages continue to grow with 2021 page volumes exceeding pre-pandemic volumes by over 10%.

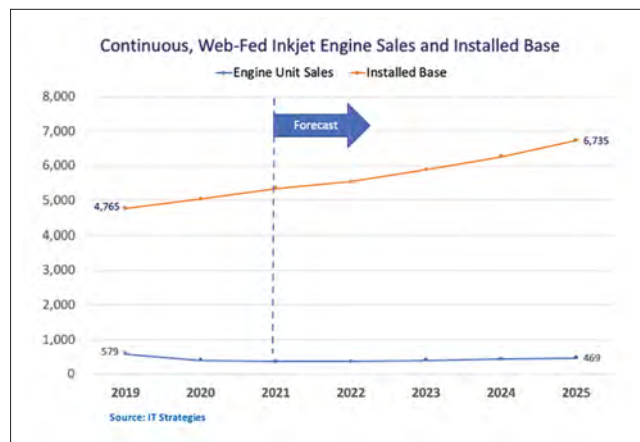
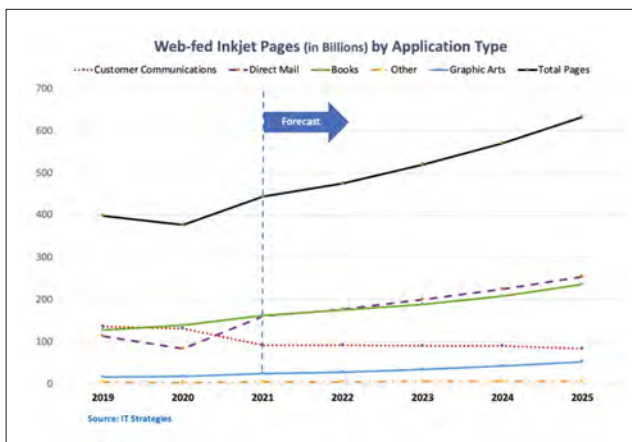
“Application growth is greatest in direct mail, book printing and commercial print,” Boer said.

Printed customer communications, or transaction print, is the only segment in decline. Pages printed on web-fed inkjet presses are projected by I.T. Strategies to reach 570 billion by 2025 with direct mail representing 40% of that volume, followed by books with 37%. Customer communications, which until recently, was the highest volume producer of production inkjet pages will represent only 13% of the volume by 2025, while graphic arts pages are expected to grow to 8% on the back of advances in color quality and substrate compatibility.

While annual sales of continuous feed inkjet engines are not expected to reach 2019 levels until around 2027, the installed base is growing by more than 5% per year, and this does not include upgraded or refurbished presses.

I.T. Strategies estimates that up to 100 engines may be sold as refurbished or upgraded units in 2021.

HP, for example, has had a strong commitment to providing an upgrade path for their continuous inkjet presses and has been very active in pursuing field upgrades since the PageWide T250HD became available early last year. In many cases, new OEM inkjet



releases are not backward compatible, which has created a strong aftermarket for refurbished presses.

Installations of sheet-fed inkjet presses, which entered the market much later than web-fed presses, are on a strong growth trajectory despite overall market challenges.

According to the IDC “U.S. and Worldwide Production High-Speed Inkjet System Forecast,” May 2021, the compound average growth rate (CAGR) for B3 format sheetfed inkjet presses is projected at 15.5% between 2020 and 2025, followed by a combined CAGR of 12.5% for B2 and B1 sheet format inkjet presses. This compares to a projected 7.3% CAGR for web-fed presses during that time frame.

A couple of points to put those statistics in context:

First, sheet-fed presses are starting from a much lower number than web-fed sales. So despite higher growth rates, the installed base of sheet-fed presses will likely remain less than half that of web-fed presses through 2025. Annual sheet-fed engine sales may close in on 75% of web-fed engine sales by 2025.

Second, since most web-fed presses are dramatically more productive than sheet-fed presses, the majority of page volume will continue to come from web presses for the foreseeable future. It’s also interesting to note that the earliest sheet-fed inkjet presses on the market were B2 format, first from Fujifilm and then from Konica Minolta and Komori.

As of 2019 the breakdown of sheet fed installations was roughly 60% B3 and 40% B2 and larger. By 2025, it’s expected that B3 will represent 70% of installations despite expectations of additional B2 presses reaching the market. In general, B3 presses are less expensive and therefore more attainable to a broader audience.

When looking at the pace of inkjet R&D, consider that many printer OEMs also have a significant office division e.g. Canon, HP, Ricoh and Xerox. The work-from-home impact of the pandemic decimated office inkjet revenues.

While these are typically separate divisions, the

overall corporate revenue picture has a trickle-down effect on divisional R&D and marketing budgets. This, along with a dearth of shows available for launching new products may have dampened the enthusiasm for launching new presses in the past year.

So far, the only actual “launched and available” presses in the past year have been the Canon ColorStream 8000 in May of 2021 and the Super Web Digital WEBJet 2100P Printing System announced in January 2022. Both of these presses target convergent aspects of the transaction printing and direct mail segments, as well as portions of the publishing and commercial print markets that don’t require offset coated papers.



### Canon ColorStream 8000

The ColorStream family of inkjet presses is one of the most successful press lines on the market with more than 1,500 worldwide installations prior to the launch of the 8000 series. The new generation has built on this success with more speed, more channels, higher resolution and a wider range of compatible substrates. There are two models available and key features include:

- Speed of 133 m (436 ft)160/min for the 8133 model and 160 m (525 ft)/min for the 8160 model with a 22 inch/560 mm web width and 21.25 inch/540 mm maximum print width.
- Kyocera 64 kHz drop-on-demand piezo heads delivering 1,200 x 720 dpi resolution on the 8133 and 1,200 x 600 dpi on the 8160.
- Six color stations with the fifth an sixth available for MICR, security or custom inks. (No plans for expanded gamut at this time.)
- Supports uncoated and inkjet formulated paper weights from 40 to 160 gsm.

## Super Web Digital WEBJet 2100P Printing System

The WEBJet 2100P was actually installed and on the market for nearly a year before the launch announcement. Super Web made many upgrades to the WEBJet series with the 2100P including moving from Memjet VersaPass dye to Memjet Duralink pigment print-heads, which have slightly higher resolution with a broader color gamut and longer life. The press is also configured with a scalable Adphos web and air knife drying units.

Key features include:

- Speed up to 149 m (490ft) 160/min with a 20.5 inch (520 mm) web width and 17.5 inch (445 mm) maximum print width.
- Memjet MEMS thermal aqueous drop-on-demand piezo heads offer 1,600 x 1,585 dpi resolution
- Supported paper weights listed as 16 lb. bond to 7 pt. (approximately 60 to 146 gsm). Compatibility with uncoated and inkjet formulated grades.
- Easy configuration with proprietary Super Web finishing for an “all-in-one” platform including slit & merge, perforating, punching, cutting, folding and/or stacking solutions.

## What's Next?

While only two new presses made it fully to market, one more is coming soon.

Kodak announced the Prosper Ultra 520 in June of 2020 and will be showing the press running at their “Innovation in Action open house” on June 15 and 16 in Dayton, Ohio, with sales beginning later this year. Also, Ricoh teased the Z75 B2 sheet-fed press in December 2020 and again in May 2021, but we can't confirm that it will come to market in 2022.

Meanwhile a host of finishing and efficiency suppliers are offering solutions to help printing companies handle scarce



WEBJet

paper and labor resources more efficiently while increasing the value of printed pages.

Smyth notes that there are innovative solutions on the market, particularly for roll-fed environments, from Contiweb, Hunkeler, Horizon, Muller Martini and Tecna and others that deliver “roll-to-product” solutions.

“Clever print companies can re-engineer print manufacturing with inkjet – digitizing integrated production to move away from the traditional serial print manufacture with lots of downtime and WIP on the floor,” he said. “I also think there has been a change in print company outlook, looking at appropriate technology for a particular task with intelligent workflows following rules to manufacture print products efficiently.”

In the end, inkjet is coming full circle with the notion of reengineering production at the heart of continued inkjet adoption and success. In addition to looking for continued enhancements to inkjet platforms such as inline quality control, simplified operator environments, streamlined maintenance processes and of course print quality, printing companies should be looking closely at opportunities to surround these systems with automated manufacturing hardware and software solutions. This is where opportunities can be found to drive down total cost of ownership, drive up profit and deliver more value with every printed piece. ●



*Elizabeth Gooding helps companies to streamline their business process, improve customer retention, and maximize new opportunities for document design, print and Internet technology. Contact her at [Elizabeth@inkjetinsight.com](mailto:Elizabeth@inkjetinsight.com).*

# IMPRESSIVE SOLUTIONS FOR FINISHING

2022 Tech Outlook

**T**here's something pretty fascinating going on in the finishing category. For the (many) years that I've been following advancements in the industry, this is the year that I've seen finishing automation really hit its stride in a new way.

To clarify, there have been incredible finishing technologies that have launched over the past several years, but what I want you to take note of in 2022 is the truly buttoned-up "systems" that are coming out. Systems that enhance already automated folders, perfect binders, cutters and the like, combining several finishing steps and drastically reducing touch-points, improving quality and stabilizing costs.

We're also seeing impressive solutions for the heaviest-touch tasks that can no longer be solved (economically) by teams of low-skilled workers—these have always been some of the toughest to automate, and therefore the last to show up at the automation "party,"



MBO Autonomous Production System



so-to-speak.

And it's not just on the mechanical side of the process—there are big advancements on the software side as well—for instance, fully automated machines that are further enhancing their production throughput with the use of Artificial Intelligence (AI). We're talking next-level problem solving, automation and optimization of an entire process, rather than a string of automated steps or functions.



*Trish Witkowski specializes in creative solutions and engagement strategies for direct mail and marketing. She frequently travels and speaks to print organizations and their clients to illustrate the power of print.*



Muller Martini Primera PRO

Having programmable finishing equipment on the shop floor is one thing, but the ability to automate an entire finishing workflow is the next frontier for many printers.

So, what's new in 2022?

## Fold and Stack

One of the newest examples of end-to-end finishing automation is the MBO Autonomous Production System—a modular system made up of the K8RS Pallet-fed Folder, VT50 Inspection Unit, Autopilot Controls, KT90 Turn Unit, A80 Stacker and CoBo-Stack Palletizer.

Once a pallet of printed paper is loaded into the Palletized Folder Feeder, the system takes over. It feeds the paper, checks for marks on the sheets for the beginning and end of a job, folds the signature, scans the dimensions of the final folded product for accuracy, rejects the poor ones, then stacks and palletizes the good ones. The entire process can run stress-free at full speeds of up to 30,000 sph with a single operator.

Rollem's Insignia Die-Cutter was designed to allow print service providers the versatility to pivot production demands as needed from short-mid runs of folding cartons to kiss-cutting work in a very easy changeover process. While cartons require dual



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Rollem Insignia Die-Cutter



magnetic cylinders for die-cutting, creasing, perforating and hole punching—the Insignia can run decals, stickers or other kiss-cut products on the same dual mag setup, which is accomplished by using a single die against a blank jacket on the cylinder. Other benefits include 4,000 sph die-cutting speeds and three efficient, end of line off-loading options (a stripping unit, the vertically receding StackMaster, or a removable cassette).

Koenig & Bauer introduced the CutPRO Q 106 SB with Cut2Print optical registration—a newly designed and engineered high-speed flatbed die-cutter that promises superior productivity and greater throughput of folding cartons. The CutPRO Q has a top speed of 9000 sheets per hour and can handle folding carton stock up to 60 point and fluted stock up to 3mm. The CutPRO Q also has a new sheet interleaving device that is completely makeready-free.

To reduce labor and speed-up production in the die-cutting process, much of the focus should be given to the delivery area—and the biggest issue in high-speed die-cutting is the challenge of taking the final product off the machine without needing four people to keep up with the high rate of speed. To directly address this issue, Bograma has built the STA 550 R Stacking Delivery that has the ability to run a six-up product at 8000 sph, all with the oversight of just a single operator.

The Moll FlexCut 760 Digital Rotary Die Cutter produces premium quality knock-less die-cutting, plus kiss-cutting, scoring, slitting and perforating all in one pass for commercial and packaging applications up to 24 pt paperboard. The machine is very useful for CR80 loyalty/gift cards, too. Servo driver pre-registration ensures that the cut follows the slight movement seen

in the digital printing process. The system reads a digital print reference mark and adjusts the cut for

every print at speeds of up to 7,000 sheets per hour. Without the knicks/ties the machine easily strips the waste away on each and every sheet that comes out, eliminating tedious hand stripping and cleanup.

## Trim, Splice

The new Hunkeler DocuTrim will be available in North America later this year. The DocuTrim is a multifunctional sheet processing system that will meet the requirements of the latest generation of printers. It runs inline with sheet-fed production printing systems and also can be run offline. It enables the cutting of various formats and position-independent slit cuts and chip-outs. Thanks to the system's modular design, a wide range of solutions can be individually added to create the idea solution for your operation.

The Hunkeler RX8 Roll Changer and Splicer is an exciting new product from Hunkeler's Generation 8 line of solutions for today's continuous feed inkjet printers. The RX8 allows automated, non-stop roll-to-roll printing and automated splicing at speeds of up to 800 feet per minute. Two unwinding stations and an integrated web buffer allow for continuous paper feeding into the printer or finishing solution during the splicing process. Other benefits include the ability to handle rolls of different diameters or partial rolls, different types of paper rolls (ex: switching between different weights, colors), ergonomic roll loading and more.



Koenig & Bauer CutPRO Q 106 SB

Hunkeler RX8 Roll Changer and Splicer



renewed with the Prinova at 9000 cycles/h and the Primera PRO at 14000 cycles/h. These two new

highly automated saddle stitchers cover the need of today's market for seamless production of smaller jobs with reduced changeover times and fewer operators.

Tecnau will be launching BookReady in mid-2022. As the name implies, BookReady will be aimed at book applications. Book blocks are neatly cut, stacked, offset separated and delivered to a belt conveyor ready for the next finishing process. BookReady is based on Tecnau's established Stack 1010 system, and will be introduced as an inline system for the Canon varioPRINT 6000 TITAN series of monochrome digital presses. It will also be available as an offline system with added feeder to run output from any sheet-fed print platform.

Also from Muller Martini, the successful Vareo perfect binder has been further improved and is now called Vareo PRO. In an in-line configuration with the end-sheet tipper and the InfiniTrim trimmer, the flexible VareoPRO can produce both softcover books and hardcover book-blocks (with end-sheets and mull station) in a mixed mode during the same production sequence. In the high-performance category, the Publica PRO range of perfect binders has been introduced, offering a range from 12000 to 18000 cycles/h.

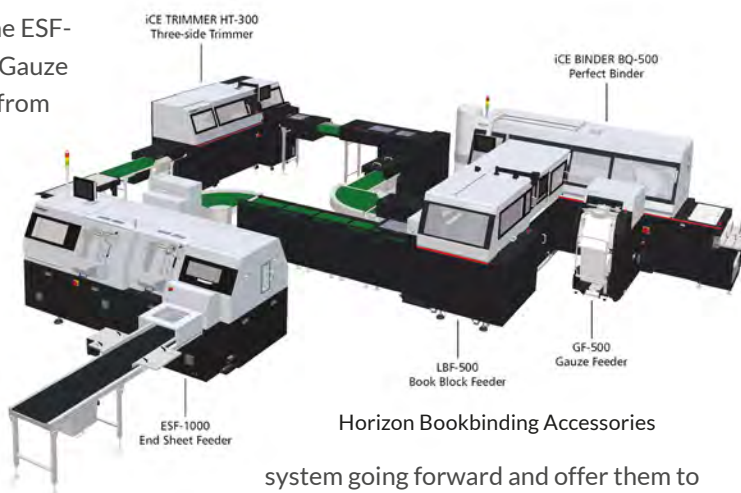
## Book Binding

Three new Horizon Bookbinding Accessories were recently introduced for the BQ-500 four-clamp Perfect Binder—a machine that enables book-of-one production at speeds of up to 800 books/hour. Horizon launched the LBF-500 Book Block Feeder, along with two new accessories for case bound book preparation—the ESF-1000 End Sheet Feeder, and the GF-500 Gauze Feeder. The machines can be configured from standalone systems into a fully connected Smart Binding workflow that provides a highly efficient solution to challenges such as improving speed, quality and decreasing the labor and material costs associated with applying end sheets and gauze to case bound books.

The complete portfolio of Muller Martini saddle stitchers has been

## Software Technology

Highcon Systems Ltd. and Tilia Labs announced a partnership that will build the unique software capabilities of tilia Phoenix into every Highcon



Horizon Bookbinding Accessories

system going forward and offer them to existing customers. The software will automatically place optimized nicks and stripping lines within tilia Phoenix, its flagship planning and imposition application that employs Artificial Intelligence (AI) technology that enables optimal imposition and dynamic



Tecnau Book Ready



Horizon

jobs ganging. These capabilities will reduce the number of production runs, makereadies and changeovers.

To reduce makeready time at the guillotine cutter, Polar customers can implement the Polar Compucut



Heidelberg Easymatrix 106C/CS

system. This software allows the cutting program to be prepared offline in pre-press and then downloaded to the cutter. By implementing this, printers will reduce the makeready time on a cutter down to just a few seconds, dramatically increasing the output.

## Packaging

Given the growth in the packaging segment there have been great opportunities for commercial printers to move into the market. The Easymatrix 106C/CS from Heidelberg is a 41-inch flatbed die-cutter

with full stripping capability offering commercial

*Continued on page 70*

## Horizon Rotary Die Cutting System

RD-N4055



**Horizon**

### NEW automated solutions from HORIZON improve efficiency for small or short-run pieces.

With a high-capacity feeder, a single- or dual- magnetic cylinder die cutter, a new, specially designed SPC-N4055 separator with 20 transport belts, and optional card stacker that eliminates manual separating and counting, the RD-N4055 Die Cutting System can increase productivity by 20% compared to the previous model.



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# THE ART AND SCIENCE OF DATA IN A WORKFLOW

2022 Tech Outlook

By Pat McGrew & Ryan McAbee

**J**ournalists learn to craft a story by following the data points that come from asking who, what, where, when and how. A modified version of that rubric works for data collection.

We want to know why a datapoint is essential and the best method to collect it. We want to know what metrics will lead us to the insights we need and how often we should collect and analyze them.

Not all data is created equal, and not all metrics lead to actionable insight. When it comes to data, there is both art and science to deciding what data points will produce the most benefit.

## Why is data important?

Print service providers naturally fall along the path of value creation or cost reduction based on their business and operating models. Those focused on costs try to consistently manage and reduce the elements necessary to manufacture print. Vendor and supplier contracts are negotiated on the best possible terms. Solutions to increase automation and efficiency to limit labor costs and increase throughput are a high priority. The cost reduction model is analogous to the Amazon system, where scale and fractional cost improvements matter.

Other PSPs focus on creating value through





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more customized, personalized and higher-margin products. These printers develop innovative products that can sell at a premium. They are likely to invest in digital embellishment capabilities like raised printing, coatings, small-run flexible pouches and intricate finishing. The value creation model is like Apple, where creativity and innovation matter most.

The reality is that most PSPs attempt to control costs while also expanding into higher-margin applications and lines of business. How good are your cost controls? What products are most profitable? These questions need empirical, irrefutable data to be answered, not intuition, anecdotes and guesswork. Data is the science, but determining what data matters is an art form unique to the goals of each print business.

### What data is Important?

There are tens of thousands of datapoints available in an average print shop. There is machine data that identifies start, stop, stall, restart, jam and other elements. Printers may also be tracking heater and fuser temperatures, while cutters may be monitoring the elapsed time since the last blade change. There is job data that informs the job ticket and may feed scheduling systems. There is data related to the raw materials needed for the job and to the finished product.

You could bury yourself in data, but the better approach is to identify what will help you run

the business and the production floor most efficiently. In performing operational assessments with PSPs, we found that the cost of goods sold

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(COGS), profitability and accounts receivable performance are the best places to start.

Start with data that informs your costs. What do you include in your cost of goods sold calculation? For many printers, the focus is on the cost of the raw materials like ink, toner and paper. Some include the labor cost and the cost to lease and maintain the equipment, but there is a larger list to consider.

- What is the cost of warehousing the raw materials?
- What is the cost to power the production floor?
- What is the cost of waste removal?
- Are the costs related to unapproved jobs captured?
- What is the cost of warehousing the finished goods?

These may not be relevant for smaller operations, but the larger the operation, the more important they can be for determining how to achieve the target profit margin. Even that is a point of discussion. Are you tracking profitability by job? If so, the data you capture may be painting an inaccurate picture.

Profitability comes in many forms and tracking

by job may be disguising issues that would emerge if you tracked profitability by customer and by product. Some “problem” customers may erode profitability based on their product mix, high number of touchpoints during job onboarding, or the level of corrections requested for the work they send.

Profitability ranking reports will show outliers that need to be addressed. You might choose to address problem jobs by outsourcing some of the work, ensuring chargebacks are included for corrections and excessive touchpoints, or by increasing pricing.

A similar approach can be used to rank profitability by product type. It is impossible to produce all applications with the same efficiency. Less profitable products might be outsourced or eliminated from your product offerings.

Finally, pay attention to the speed and accuracy of your invoicing to increase your accounts receivable performance. Too often, manual review steps, like having the salesperson verify charges, are added before the job can be invoiced. These handshakes add unnecessary complexity and extend the time before you get paid for your services.



They might also lead to unapproved discounting not accounted for when the job was quoted. Most print MIS solutions can track changes to the job order that incur additional charges to automatically reconcile the job costs and invoicing, streamlining the process.

## Where is the data?

Your print MIS and accounting solutions are the keepers of important business data. Many of these reports, like profitability and COGS, require accurate costing data and, more importantly, capturing information from the shop floor. Unfortunately, shop floor data collection is an underused function for many shops that own a print MIS solution.

The key to internal adoption is to get the minimum amount of information with the least amount of input from the operators. Basic times (start/stop/pause) and material consumption (ink/toner and substrates) are a good balance between the effort required versus the benefit. Since the reports are pulled as needed, the data can be batched in

intervals instead of setting up real-time data, which is more complex and costly.

Increasingly, some of the information, like run times and ink consumption, is captured by new generations of equipment with built-in sensors. The machine data is typically presented in vendor-specific dashboards but may be accessible to other systems through file-based data exchanges (e.g., CSV), JDF/JMF conversations, or through application programming interfaces (APIs). When integrated, the machine data provides an accurate record from the device while freeing the operator to focus on running the job and maintaining quality standards.

## Blending Art and Science

Like PSPs who blend the value and cost reduction methods in their business, finding the right mix of art and science to collect and interpret data is critical to success. There is no value in collecting an endless amount of data with no ability to mine it for insights. There is equally little value in analyzing data that cannot provide actionable insights.

The goal of every print shop should be to look at the shop floor workflow touchpoints and available machine data to identify the best actionable data. Then prioritize the list and begin to build the data collectors and analytics processes to feed your strategic business decisions.

As time passes, continue to fine-tune your processes by evaluating the data you collect and the insights you gain to improve your long-term success. ●



*Ryan McAbee is the Director of Keypoint Intelligence's Production Workflow Consulting Service. He is responsible for conducting market research, market analysis and forecasting, content development, industry training, and consulting with print service providers.*



*Pat McGrew has more than three decades as an evangelist for technology in communication. She is an author and regular writer in the industry trade press.*

# LABELS & PACKAGING MARKET EVEN STRONGER

2022 Tech Outlook

By David Zwang

**L**abels and packaging went through the pandemic strong, and came out of it even stronger.

Some of that growth was a movement from analog to digital production to address the shifting consumer purchasing behaviors, including an increase in product segmentation, mass customization and personalization.

Labels and packaging have been able to skirt much of the paper and labor availability pressures seen by commercial print, but supply chain issues in general seem to leave no one untouched.

The effects can be seen in the availability of machine components as well as consumable availability and increased costs, however equipment vendors and converters are still producing despite the pandemic response in China and the turbulence in Eastern Europe. So what do we have to look forward to in 2022 and beyond?

## The Market

Packaging is essential to both good and bad market conditions, and it will continue to play a major role regardless of pandemic disruptions or



Xeikon PX3300

regional conflicts.

Population growth is higher in emerging regions like Africa, Asia and the Middle East,

but it is showing moderate projected growth in North America and Western Europe as well.

The use of more individual packaging in place of bulk is growing, and online purchasing of goods has driven the demand for new packaging and repackaging options.

Consumers are now demanding, and regional governments are enforcing, more efficient and sustainable production methods to reduce the net impact on the environment. This includes reduction of energy use, harmful exhaust and waste in manufacturing and a more circular and low-carbon economy in packaging.

As a result, both the equipment as well as the packaging components and processes are changing to address the purchasing and sustainability demands.

## Product Innovation

### Labels

Label volumes are continuing to grow, and flexo still accounts for the majority of label production, however the higher growth rates are seen with digital print technologies including electrophotographic, inkjet and hybrid flexo (all in one) inkjet production.

In the electrophotographic space, HP has been shipping their Indigo 6K and 8K liquid toner label press, and is going to beta with their "Series 6" technology Indigo V12 this summer to a customer in EMEA, with other beta units not far behind. This new technology will present the fastest



HP Indigo V12



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Bobst Digital Master

electrophotographic production rates for six colors at 120 m/min (400fpm) and more than six colors at 60 m/min, designed to compete with narrow web flexo.

Xeikon has a significant market share of toner label presses, including their CX300 Cheetah dry toner press, which supports swappable colors and can include metallic gold and silver toners, which fit in the fifth color station. They have also been shipping their PX3000 Panther UV Inkjet press series, which prints at 70 m/min (230 fpm) equipped with up to eight colors. The recently launched next generation label converting units can include varnish, spot varnish, laser die-cut, hot foiling and screen printing in addition to rewinding.

Recently introduced hybrid presses, also known as “all-in-one” presses, include the Bobst Digital Master series in narrow- and mid-web widths. They can print up to 100 m/min and be configured with six UV colors plus digital white. It uses the Bobst Mouvent Cluster imaging and their configurable M5 flexo platform.

Other all-in-one presses include the Canon LabelStream 4000 UV inkjet press, which uses an imaging station initially developed by FFEI and a transport developed by Edale.

Mark Andy has a number of all-in-one presses, including Digital Pro, Digital Series iQ and the Digital Series HD, which is designed for future growth.

Durst offers their RSC line of press, which were developed in conjunction with OMET, the flexo press manufacturer.

## Flexible Packaging

The increased use of flexible packaging provides many benefits throughout the supply chain. It

minimizes package transport costs, takes up less space when empty, and can be constructed on the spot from roll materials at the filling location. It also offers better opportunities for reuse and recycling. As a result, it is the fastest growing segment of packaging types.

The majority of flexible packaging is being produced flexo with gravure still producing some of the longer and more consistent production.

Some label converters are using their narrow web presses to produce flexible packaging, but this is a growing area for specifically designed digital solutions with HP and Xeikon jockeying for early dominance of the short-run flexible packaging market.

To compete with Flexo on the longer runs, SCREEN is going to beta with their Truepress PAC830F aqueous flexible packaging press. This will compete with the UTECO/Kodak Sapphire EVO W.

Fujifilm also announced their J Press FP790, which is anticipated be installed in beta later this year.

The modular Koenig & Bauer RotaJET L and RotaJET VL, are starting their beta cycles that are designed to support a wide variety of media and could be targeted at flexible packaging.

## Folding Carton

The bulk of carton printing is still produced offset, with flexo and gravure accounting for still significant amounts.

With Heidelberg, Koenig & Bauer and Komori

*Continued on page 36*



KBA RotaJET

# Experience More from Your Sheetfed Press with the Canon varioPRINT iX

Let's talk sheetfed production printing. How happy are you with your current solution? Canon customers are raving about the Canon varioPRINT iX-series and 2022 inventory is on pace to sell out again this year.

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If you are looking to achieve remarkable uptime, consistently high-quality, little operator intervention and the ability to print more high-value applications, look no further than the varioPRINT iX? Maximize sheetfed inkjet's potential like never before with the heightened productivity of this press and experience how you can turn "what if?" into "can do." ●

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### Joris Bosch on Digital Printing and Finishing

Joris Bosch from Holland-based Wihabo talks about digital printing and finishing. Wihabo added an HP Indigo 10000, which was a game changer for the company.

Find video here: [www.printingnews.com/21159728](http://www.printingnews.com/21159728)



### RMGT's "Commit to Print" World Tour

RMGT's rock-n-roll themed "Commit to Print" World Tour, celebrating heavy metal and sheetfed-offset printing, kicked off earlier this month.

Find video here: [www.printingnews.com/21159866](http://www.printingnews.com/21159866)



### Why Amplify? An Exciting New Show Taking Place in Minneapolis in June!

The organizers talk about what to expect at Amplify and to consider finishing at the beginning of the job.

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### The State of HP Indigo Presses Post-COVID

David Zwang talks to Eli Mahal, Head of Marketing, Labels & Packaging, for HP Indigo. Growth has been significant for Indigo and their customers in all segments.

Find video here: [www.printingnews.com/21159694](http://www.printingnews.com/21159694)



### Cober Solutions' Jeff Sider on Attending Dscoop

Jeff Sider, Senior Development Manager for Cober Solutions, a 106-year old technology company that does a little bit of everything talks about Dscoop.

Find video here: [www.printingnews.com/21159695](http://www.printingnews.com/21159695)



### Empowering Women in the Printing Industry Through Mentorship

Blooming Color's Rosemarie Breske Garvey and MagnetStreet's Brenda Baird share some highlights.

Find video here: [www.printingnews.com/21159706](http://www.printingnews.com/21159706)



### Ricoh Ups Its Fabric Printing Game with Direct-to-Film Solution

Ricoh has been working to increase the flexibility and capability of its direct-to-garment digital printing portfolio.

Find video here: [www.printingnews.com/21159717](http://www.printingnews.com/21159717)



### Adam Sidrane on Digital Labels and Packaging

Adam Sidrane from K. Sidrane talks about digital labels and packaging. K. Sidrane specializes in digitally printed labels, folding cartons, shrink sleeves, and flexible packaging.

Find video here: [www.printingnews.com/21159727](http://www.printingnews.com/21159727)



*Continued from page 33*

digitalizing their offset presses, you can expect that offset print will be a viable competitor for carton work. One of the more anticipated folding carton solutions is the Heidelberg Boardmaster, a high-speed wide flexo press with on-the-fly job changes and lots of digitalization. This is expected to go into beta later this year.

Digital carton production is growing to address the shorter-run mass customization market and is projected to show significant growth in the future.

Many of the current digital offerings are B2 or B2+ format, including the HP Indigo 35K, Fujifilm J Press 750S and the Konica Minolta AccurioJet KM-1e.

In the B1 format, the Koenig & Bauer VariJET 106 and Landa S10 are currently the two primary players that are shipping. The MGI AlphaJET, a modular complex production flow system has finally gone to beta after a long development cycle, and the newly introduced Speedset from Inca (now an Agfa company), which has been announced but probably won't be going to beta until late 2023.

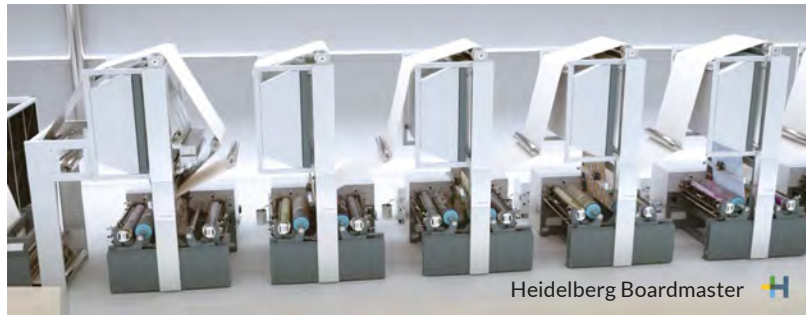
### Corrugated

Corrugated is used for packaging and for in-store display and is the largest volume packaging type.

Flexo maintains the healthy volume of corrugated production, with offset and gravure still holding a declining percentage. Much of that decline can be attributed to the growth of digital corrugated production presses. Higher performance offset presses by Heidelberg and Koenig & Bauer are holding back some of that technology transfer.

To address the mass customization market in the digital preprint space, the HP T470S and the T1190 compete with the Koenig & Bauer VariJET, which offers a preprint alternative to their CorruJET postprint solution.

Digital Postprint corrugated production is seeing a lot of growth and an increase in available solutions. These include the HP C500 with the new innovated top feeder, the updated EFI Nozomi C18000 Plus and the recently introduced Nozomi 14000 LED and the Barberán Jetmaster. The Xeikon's IDERA and the Domino X630i are out of development and now both



installed in North America and other regions.

### Bespoke

Component Inkjet technologies from print heads to print bars and full printing systems by Memjet, Dimatix and XAAR will continue to drive the increase in bespoke packaging production solutions, both standalone and integrated with manufacturing lines. And while each of them has been providing imprinting solutions for personalization, track and trace and security, they are now offering full-color inline solutions for product manufacturing.

### Converting/Finishing

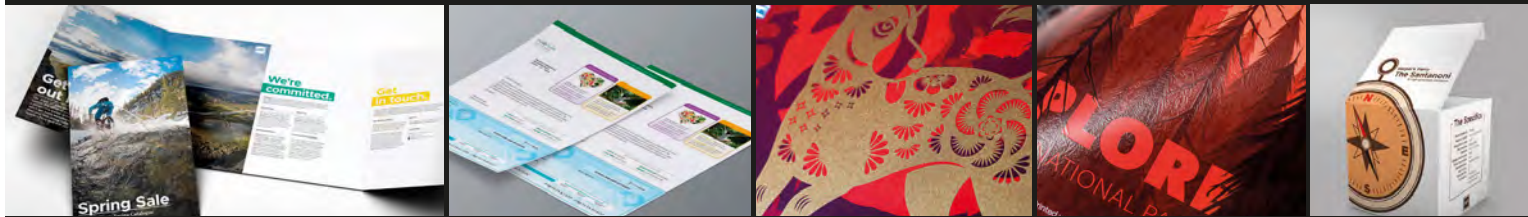
As the saying goes, printing is not finished until it is finished. Obviously the same goes for packaging. Digitalization of finishing and converting equipment is increasing to keep up with the requirements of digital print. While much of the same equipment, like die cutters and folder gluers that are already installed in converters facilities could suffice, the volume of shorter runs really demands a better suited solution.

Companies like SEI and Highcon have been marketing digital die cutting solutions for a few years. Semi Rotary die cutting inline on hybrid and all-in-one flexo presses are becoming standard fare. Bobst just introduced the Mastercut 1.65 PER, a folder gluer designed to satisfy the requirements of digital retail.

When it comes to embellishment of roll media for packaging, ABG has the most flexible systems to compliment digital label and packaging finishing. The modular design of the Digicon Series 3 units provide the needed flexibility to target the specific application(s) of a converter, and they provide a high degree of automation.

Automation in converting and finishing is becoming even more important now that it is harder

*Continued on page 71*



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# TREND AND TECHNOLOGY IN THE INDUSTRY

## 2022 Tech Outlook

By Richard Romano & Cary Sherburne

In our annual Technology Outlook, we tend to group wide-format and signage, and textiles and apparel together, as there is a bit of overlap—maybe not in terms of end users, but certainly in terms of equipment and manufacturers. Soft signage is perhaps the best example of where the two segments overlap, but companies like Mimaki, EFI, Durst and others are active in both wide-format and textiles.

### Wide-Format & Signage

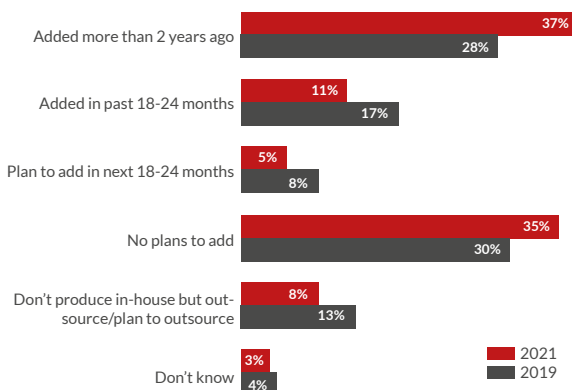
If there is one recent news story that, in a way, sums up the current state of wide-format printing, it was the acquisition of Inca Digital by Agfa.

Inca Digital is a pioneer: the Eagle 44, launched in January 2001, expanded the types of substrates that a wide-format flatbed could print on, jump-starting what would become some of the hottest display graphics applications.

Still, why the acquisition is symbolic is that Inca—and SCREEN GP IJC, which was also part of Agfa's acquisition—was developing single-pass machines for corrugated printing. Packaging. So, in some sense, we are starting to see packaging step on wide-format's toes a bit, as the focus is less on display graphics and more on packaging applications—and there is no doubt that packaging is the higher-growth segment at the moment. This is not to say that wide format is moribund; quite the opposite. But what we have been seeing over the past five or six years is a maturing of the wide-format market.

The commercial print businesses that have expanded into wide format have already done so, and the majority of the rest have no interest in it—our recent Printing Outlook surveys have found that about 30% of commercial printers are “never wides,”

Have you added, or do you plan to add, wide-format printing capabilities (like signs, displays, banners)? 2019, 2021



or as was overheard at 2019's PRINTING United show, “What's all this wide format stuff doing here?”

In many ways, packaging today is where wide-format was in the early 2010s—the exciting new area to get into, with revolutionary new equipment appearing regularly and revolutionary new applications being enabled by all the new tech. Again, this is not to say that wide-format printing today is not exciting, it's that the changes now are more evolutionary than revolutionary.

### Today's Trends

I'm not going to say too much about the unholy trinity of challenges that have plagued the industry this year—employment, supplies shortages and inflation. Let's just take them as given and move on. There are more interesting things to look at.

### Supreme Courtship

First of all, there was a major signage case pending before the U.S. Supreme Court, which was decided on April 21. The case, *Austin v. Reagan*, had the potential to completely upend the signage industry if the Court tossed out the traditional regulatory distinction



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between on-premises signs and billboards as being location-based, not content-based. Happily, the nightmare scenario was averted, as the Court decided to maintain that regulatory distinction. Whew!

### Constructive Criticism

One indicator that's useful to track is the American Institute of Architects (AIA) monthly Architecture Billings Index (ABI), which tracks the demand for architectural design services (i.e., billings). This index includes commercial and industrial buildings like hotels and offices, schools, hospitals, multi-family residences and other such facilities.

In April, the AIA found that in March the ABI soared from 51.3 to 58.0. Any ABI score over 50 indicates an increase in billings by architectural design firms. The rule of thumb is that this index leads actual commercial real estate investment by about 9–12 months, so, barring any further supply chain disruptions or massive COVID surges, there looks to be a pick-up in commercial and industrial real estate development as we head through 2022. Sign businesses should keep an eye on construction activity in their area to get a jump on involvement in these projects.

### Demo Centers

I have pointed out in past articles that demographic changes can impact the wide-format and signage business, positively as well as negatively. For example, the Great Resignation/Reshuffling/Whatevering has made finding employees a challenge, but as it is largely fueled by an entrepreneurial drive, has caused a massive rise in new business formation, businesses which need signage and other kinds of graphics. We also noted in last issue's "Franchise Review" that it has also resulted in a rise in new franchise owners and thus an expansion of the print and sign franchise networks.

One other set of demographic changes caught my eye recently.

The Census Bureau released its National Population Statistics: 2020–2021, which includes the top age cohorts for 2020 and 2021, as well as their projections for 2030.

In a nutshell—via Calculated Risk—last year, six of the top seven age cohorts were under 40, and by 2030 the top 10 cohorts will be the youngest 10 cohorts. After the 2010 Census, the younger Boomers dominated the population distribution, but as of the 2020 Census, it's the millennials and Gen Z (or whatever we're calling them).

Why is this important? It means not only that the prime working age population is increasing, but there will be increased demand for things like housing, durable goods, cars and all the other stuff that younger people—and people who are starting families—buy. In a nutshell, a "youthening" of the population bodes well for the economy.

### Empty Nesting

For the longest time, "automation" in wide format meant little more than nesting optimization, and for good reason.

According to Keypoint Intelligence, 88% of wide-format providers gang and nest jobs manually—with 59% of respondents saying that manual nesting takes, on average, 1–10 minutes per job, and another 19% saying it takes even longer. They cite in particular Tilia Labs' AI-based approach to nesting optimization which "uses experientially learned pattern recognition to identify efficient potential nesting approaches across images and jobs. Thus, the solution combines the power of computers to inspect millions of combinations while also borrowing the human ability of starting with the most likely candidates."

Other wide-format automation options are emerging, which can be software- or hardware-related.

On the software side, a good start is a web-to-print portal that allows customers to get quotes, submit jobs, or purchase standardized templated products.

Historically, the bandwidth required for submitting wide-format jobs was a bit of a limitation, but in today's cloud-powered world, it's much less of one. A lot of sign and display graphics providers built out web-to-print portals during the pandemic. Once jobs are in the system, they can be optimized for cutting

and then routed to the appropriate output device.

On the hardware side, automated feeding systems and even robotics to load and offload boards much more quickly and accurately—and more safely—than human hands can manage.

### “3D” Printing

As I note elsewhere in this issue, 3D printing in the world of wide format doesn't necessarily mean what we think it means—that is, additive manufacturing used to build up three-dimensional objects.

While units from Mimaki (in the entry-level/mid-production range) and Massivit (high end) have their niches, at the moment they are not entirely practical or economical for everyday display and signage graphics.

What is serving the purpose of 3D printing is using a UV flatbed machine—units from DCS and Mutoh are especially favored—to build up layers of ink for Braille lettering for ADA-compliant signage. This isn't especially new—flatbeds have long had the ability to layer ink not just for ADA lettering but also to add texture and other dimensional effects—but more machines are letting signage producers take full advantage of this capability.

### Sustainability

As in virtually every other part of the industry (or economy), there is an interest in sustainable business practices. In wide format (and especially textiles), there are a variety of components that comprise sustainability, although some are becoming less important while others are becoming more so. The most obvious contributor to a print business's overall sustainability is the materials used. While those are still important, things that are becoming more important are end-of-life issues. That is, what do end users do with display graphics or textiles when their active life is over? And how do print businesses ensure that their operations in general are run sustainably?

These are some quick hits on some of the wide-format trends to pay attention to.

### New Products

Some caveats on new product announcements. In order to keep the list below at a

manageable length for a print publication, I have focused on wide-format-related product releases and/or announcements that have been made since the end of 2021. As we get closer to the first in-person PRINTING United show since 2019, we are likely to see more new releases and announcements in the latter half of the year.

### Printing Equipment

Launched at January's EFI Connect, the 126-in. EFI Pro 30h UV LED printer prints up to 2,477 ft.<sup>2</sup>/hr. and is a hybrid flatbed/roll-to-roll superwide-format targeted to businesses that see high-volume production of display graphics as a growth opportunity.

I'm going to contradict myself near the outset and highlight a unit that was launched last year.

LogoJet, initially founded to print on golf balls, has expanded its tchotchke-printing capabilities over the years, and last year won a PRINTING United Pinnacle Product Award for its FSR90 Edible Ink printer, which offers full-color personalization with food-grade inks on edible items. It features a 24 x 36-in. printable area and 6-in. product height. Such units are often beta-tested; perhaps this is also beta-tasted.

Mimaki had a busy year so far. In March, they launched the new CG-AR Series of cutters/plotters specifically geared for entry-level users. This series comprises two units: the CG-60AR, with a 606mm-wide cuttable area) and the CG-130AR (1,370mm-wide cuttable area).

Mimaki also introduced the TS330-1600 sublimation transfer inkjet printer, the flagship model of its new 330 Series. This unit introduces “Mimaki Weaving Dot Technology (MWDT),” which changes the order of ink droplet placement depending on printing conditions in order to reduce or eliminate



Mutoh ValueJet 1628MH

streaks or uneven printing caused by slight individual differences in the printhead or subtle deviations in adjustment. The new unit is also said to be 138% faster than earlier models.

Mimaki's new "330 Series" roll-to-roll solvent printers comprises the JV330-130/-160 and CJV330-130/-160, and these units also feature the aforementioned MWDT. The JV330-130/-160 and CJV330-130/-160 print up to 21.0m<sup>2</sup>/hr. in standard mode with four colors (CMYK), and 13.2m<sup>2</sup>/hr. with eight colors (CMYKLc LmLkOr).

Mutoh has also been hard at work this year. Launched in January, the new 54-in. XpertJet 1341SR Pro solvent printer replaces the ValueJet 1324X and features Mutoh's new AccuFine print-heads. The 1341SR Pro is up to 42% faster than its predecessor.

Launched in February, the 64-in. ValueJet 1628MH is a hybrid flatbed/roll-to-roll printer that can print up to eight colors, including CMYKx2 and CMYKWhWh (yes, that is white ink). Mutoh's new VerteLith RIP software is bundled with FlexiDESIGNER MUTOH Edition 21, which is ideal for signage and banners.

Dye-sub is where it's at, and late last year Mutoh launched the XpertJet 1642WR Pro dye-sublimation printer, a mid-level unit targeted for home décor, soft signage, sports apparel and fashion applications.

Late last year, Ricoh launched two new units, one in its UV flatbed line and the other in its roll-to-roll latex line. The RICOH Pro TF6251 UV LED flatbed can

print on items up to 4.3-in. thick and comes with two ink configurations, depending on desired application. It also adds a new rollfed option. The 64-in. RICOH Pro L5160e latex roll-fed printer can be configured to print CMYK, CMYK+White (yep, white), or CMYK + Orange & Green.

Roland launched its third-generation TrueVis Series inkjets. The VG3 Series comprises the 64-inch VG3-640 and the 54-inch VG3-540 and offers six ink configurations, including a new 8-color (CMYK+Lc+Lm+Or+Gr) option. The SG3 Series comprises the 54-inch SG3-540 and 30-inch SG3-300, which are more entry-level versions of the corresponding VG3 printers.

SwissQprint launched its Flatbed Generation 4, which features a new improved printhead to improve the already impressive quality of the Impala and Nyala models, as well as boost speed. The entry-level Oryx model is nearly 40% faster than its predecessor.

## Software

As I said earlier, automation in wide format is often synonymous with nesting optimization, and to that end, EFI launched its Fiery Prep-It true-shape nesting and cut-preparation software. It connects to any digital front end (DFE) and includes full integration with EFI Fiery proServer and Fiery XF DFEs. If you still manually nest jobs, this solution can reduce nesting time by up to 90%.

At the ISA Sign Expo, Onyx Graphics offered a glimpse of the next major release of ONYX



Mimaki CG-AR cutter/plotter.



Roland TrueViz VG3 and SG3 Series.



Printing on food with the LogoJet FSR90 Edible Ink printer.



Kongsberg C20

software that offers print service providers a new drag-and-drop user experience and easy-to-use tools for everyday automation. The next release will be available for all ONYX's solutions, including ONYX Thrive and ONYX RIP products. This latest release builds on ONYX 21.1 that introduced Swatch Books 2.0 for faster color matching and PDF tile maps to streamline tile-job installation. More to come.

Onyx also announced a new annual prepaid option for ONYX Go, the company's subscription RIP software. In addition to the no-contract monthly subscription, Onyx offers one-, three- and five-year prepaid options available through Authorized ONYX Resellers. ONYX Go prepaid is available for both ONYX Go Lite and ONYX Go Plus product tiers.

SAi FlexiDESIGN is the leading design software for the sign and print industry but has hitherto only been available for PCs. Earlier this year, the company finally made it available to Mac users.

## Finishing

On April 6, Kongsberg celebrated its one-year anniversary as a standalone company (you may recall it had previously been part of Esko). Shortly after going solo, the company launched the Kongsberg C20, the smallest (1.6m x 1.4m) high-speed production cutting table on the market. Last August, Kongsberg acquired MultiCam, Inc., a manufacturer and distributor of Computer Numerical Control (CNC) cutting machines and digital finishing processes, expanding its footprint across North America and Europe as a provider of digital finishing and CNC routing machines.

Another big name in big cutting tables is Zünd, which late last year introduced Zünd Connect, a software solution that compiles production data from Zünd cutting systems into meaningful key

performance indicators, such as cutter capacity, availability and overall equipment effectiveness, the goal being to identify areas in the digital cutting workflow with the potential for optimization.

## Substrates

New substrates and materials are proliferating like mad, and we could easily fill this entire issue with new materials hitting the market. The substrates cited below are a few representative examples of what has become available in the last six months or so.

Avery Dennison introduced an all-new Dusted Crystal decorative, frosted, architectural window film. Available in matte and luster finish, the film offers privacy while providing a translucent light effect for interior environments.

Drytac has made its popular Polar Choice White monomeric PVC films available globally. Originally limited to the UK and EU, the films are compatible with latex, UV and eco-solvent inks, and are suitable for flat signage and general advertising applications, including windows, POP displays, stickers and decals.

Fisher Textiles, usually known for its fabrics for digital printing, has added artificial turf to its portfolio of materials. Available in three weights and pile heights, applications include event and retail space flooring, backdrop walls and recreational zones for putting greens, cornhole games, children and pet play areas and more.

FloorSignage launched DriveOn Graphics, wide-format print media designed to be applied to surfaces that support both vehicle and pedestrian traffic. It's a reflective substrate that can be applied directly to streets, parking lots and driveways, and supports full-color graphics that can stand up to the rigors of vehicular and pedestrian traffic.

Mactac has launched IMAGin Simply



Fisher Textiles' Artificial Turf.

# avanti

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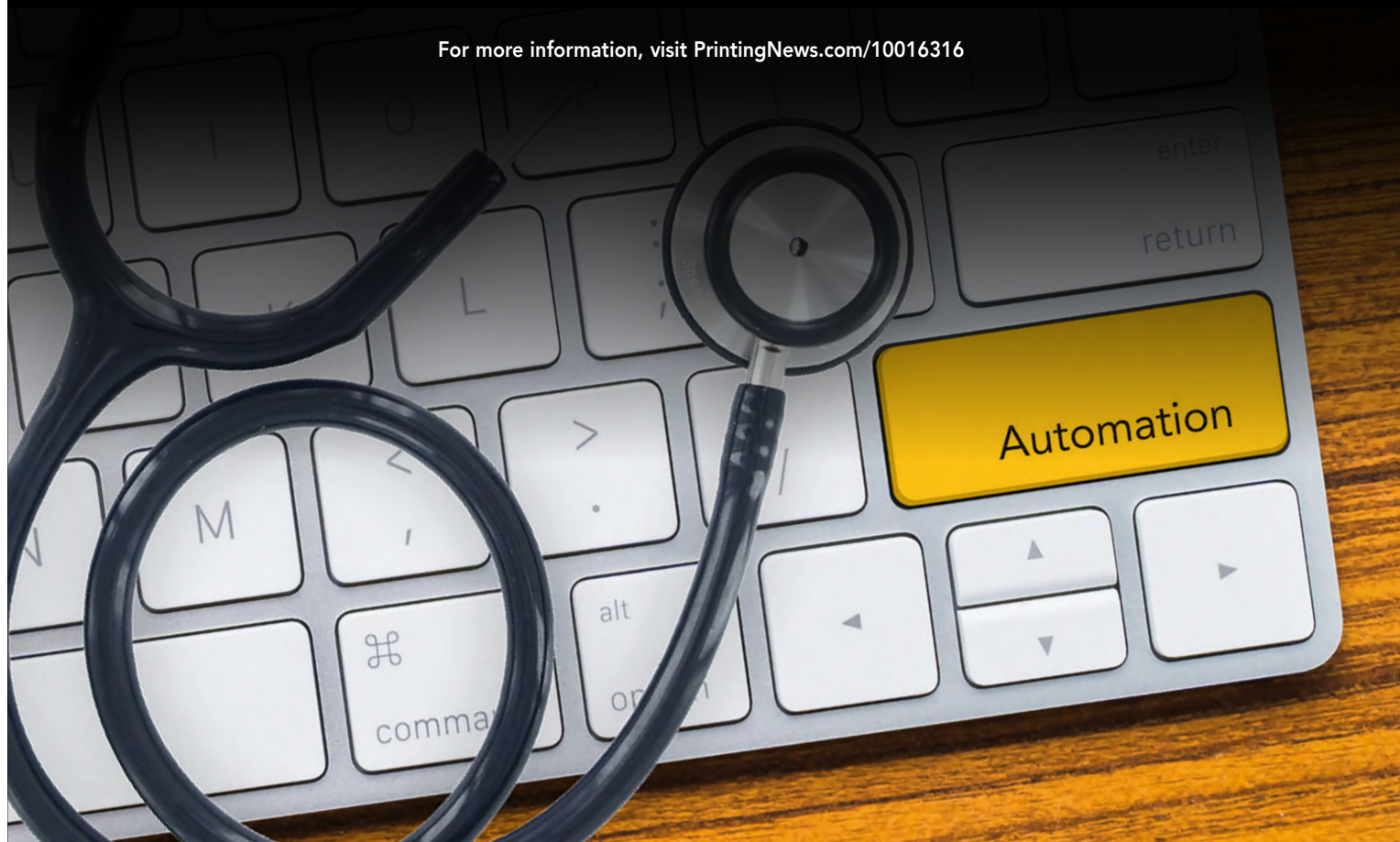
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Sustainable, a new line of PVC-free films that consist of polyester (PET) and polypropylene (PP) films that meet current regulatory standards of the U.S. Consumer Product Safety and Improvement Act (CPSIA). IMAGin Simply Sustainable products are primarily designed for window or glass surfaces but are versatile for other applications as well.

In other Mactac news, in February, the company acquired Spinnaker, which specializes in the customized production and distribution of pressure-sensitive roll label and sheet base materials in North America, expanding its footprint in the specialty label market.

That wraps it up for wide format. Cary, take it away...

### Textile Trends: Some New, Some Ongoing

Like many industries, the textiles & apparel industry was thrown into disarray by the pandemic. Supply chains crumbled, damaging relationships between brands and manufacturers and making it difficult for retailers to keep inventory levels up. During the crisis, there was a great deal of talk about making major changes to the supply chain, including more reshoring or near-shoring of manufacturing, and acceleration of the adoption of digital technologies.

As the pandemic died down, so, too, did the urgency in restructuring the supply chain, or so it seems. That's not to say that the supply chain is fixed. There are still lots of ships just sitting out at sea waiting for their turn to unload containers. And that contributes to longer lead times, shortages and substantial price increases for containers, and exponential growth in shipping costs. But as the backlog gets smaller, the sense of urgency seems to diminish as well.

Another casualty of all this is a focus on sustainability. That was a hot topic pre-pandemic. And certainly, there are many leading brands that are still working hard to make their products more sustainable. But as a long-time leader in sustainable practices, Patagonia, pointed out in a recent article, there are aspects of the design, manufacturing and distribution processes brands can control – and aspects they cannot.

One example Patagonia points out is that while they work hard to be as sustainable as possible, and

despite the fact that recycled content comprises 68% of total usage, the company doesn't really use the term "sustainable" anymore. The reason is "because we recognize we are part of the problem. Previously, we set ourselves the target of carbon neutrality by 2025. But purchasing offsets to get us there doesn't erase the footprint we create and won't save us in the long run. We must first put the weight of our business behind drastically cutting emissions across the full length of our supply chain. What is unsettling is that, right now, we aren't entirely sure how to do this."

And if Patagonia doesn't know how, who does?

The size of the overall carbon footprint is partly, if not largely, dependent on the manufacturing process. Patagonia, and other small- to mid-sized brands, share manufacturing resources in Asia, and therefore do not have full control over what happens there from a sustainability perspective.

Pre-pandemic, we also heard a lot of talk about moving away from the wasteful "Fast Fashion" model of creating basically throwaway clothing. Now what we are seeing is more "Fossil Fashion," where more than 60% of today's production of clothing uses petroleum-based feedstocks.

"The fashion sector is awash with certification schemes, sustainability labels and multi-stakeholder initiatives all seeking to steer the industry onto a greener course," according to a March 2022 report published by the Changing Markets Foundation (License to Greenwash). "As public and political awareness of the high environmental and social toll of the fashion industry has climbed the agenda, and scrutiny on brands has intensified, so has the visibility of certification schemes and voluntary initiatives pitched as holding the solutions."

The report doesn't so much throw shade on these important initiatives, such as The Ellen MacArthur Foundation, OEKO-TEX and others, as it does expose how some brands are leveraging the relative lack of accountability within many of these initiatives, which is "a key part of the greenwashing machinery of the modern fashion industry," according to the report.

### A Focus on the Future

That being said, and because I don't really want to be the new Dr. Doom, there is a great deal of

activity focused on streamlining the supply chain, bringing sustainable manufacturing closer to the point of need, using sustainable materials and reducing waste—both in the manufacturing process and as garments reach the end of life.

While some major brands are pushing toward these goals, much of the work is being done by upstarts—a common phenomenon in any industry facing structural change. The upstarts have less to lose and more to gain by driving change, and they are not hobbled by “the way we have always done things,” and large, bureaucratic organizations.

Still, progress is slower than we would like. But our Technology Outlook Webinar session on textiles highlighted some of the encouraging trends we are seeing.

### Fibers First

A key to sustainability in textiles is the types of fibers that are used to create fabrics. In the April edition of *Printing News*, we highlighted some of the terrific work that is being done in the development of new, innovative and more sustainable fibers, including:

#### HeiQ AeoniQ

AeoniQ is created from 100% natural cellulosic feed stock. It is not only a new fiber, but it is spun as a continuous filament. The goal is to provide the textile industry with a more sustainable solution with a smaller CO<sub>2</sub> footprint and a reduction of microplastics pollution.

#### 9FIBER

9FIBER is a start-up in the industrial hemp material converter space backed by 10 years of R&D. The company has patented a process for taking agricultural waste and hemp stalks and stems and converting them into two main ingredients: bast fiber, which is the outer skin of the plant, and cellulose, which is the inner or woody core of the plant. This eco-friendly degumming and decontamination technology allows the company to unlock the potential of this material and insert it into nine target markets, including textiles, creating multiple end products within those nine markets. It uses minimal water and no toxic chemistry.

### TENCEL

TENCEL, a sustainable fiber developed by Lenzing, is celebrating three decades of fiber innovation. The fiber is derived from sustainably sourced renewable raw material wood and produced by environmentally responsible processes. Most recently, the company has added REFIBRA technology. TENCEL fibers with REFIBRA technology are identifiable in yarns, fabrics and final garments owing to the innovative special identification technology designed to confirm fiber origin. In turn, this improves supply chain transparency and contributes to a circular economy.

### Kyorene from Graphene One

Kyorene Graphene composite fiber has bacteriostatic, mite repellency, UV resistance, deodorant properties, heat dissipation and increased mechanical strength functions. It can be widely used in knitted and woven fabrics and non-woven materials. It contributes to increased functionality and longer life cycles for textile-based products.

It should be noted that Graphene is being used in a number of ways in the textiles industry, including in inks and coatings, to provide additional functionality, including conductivity for wearables and other applications.

### Careful Color

Conventional fabric dyeing and printing processes not only use lots of water but also contribute to water pollution and waste. In addition, these processes are designed for large batch operations and are not economical for the production of shorter, more distributed runs. That's where digital printing comes in.

There have been major improvements in the quality and color fidelity for digitally printed fabrics, and of course, with digital printing, you can manufacture to order in quantities as low as one. Although this has the potential to completely revolutionize the fashion supply chain, digitally printed fabrics only comprise about 10% of the global total. That being said, we again have upstarts coming into the market that are not constrained by conventional processes that are leading the way to a more sustainable future.

*Continued on page 67*

# CUT THROUGH THE CONFUSION

*Is there an easy button for digital embellishment design?*

By Kevin Abergel, President, Taktiful

**E**motion. When you are adding embellishments to print, there is only one goal in mind, and that is creating emotion. Whether it be through a tactile raised effect that makes the bark on the tree you just printed feel like a real tree, a hypnotizing foil effect that mesmerizes, or a metallic or fluorescent toner that is artfully woven into a design for maximum visual impact, the idea is the same: to make you feel something more than just CMYK.

Designers know a thing or two about emotion, in fact one could say their entire livelihood is predicated on using art to convey messaging that, when successfully done, can inspire consumers to discover new products, everyday people to build an implicit relationship with brands, to donate their money to a cause or even try to change the world.

So why is it that with the rise of digital embellishment technologies now making high-end luxurious prints easier and cheaper to do than ever before, the biggest challenge most PSPs encounter is still linked to file design?

“That’s easy,” says Frederic Soulier, general manager at MGI Labs, a new structure created by MGI Digital Technology that supports the digital transformation of the MGI Group’s ecosystem to increase adoption of embellished products. “At the very essence of the issue is that there are

no recognized file nomenclatures and standards for the digital embellishment market. Every equipment manufacturer, PSP and design agency is using its own nomenclature to name file separations and effects, and this leads to confusion in the design stage, mix-ups at the workflow stage, issues at the production stage, and ultimately may cause an aversion to using these new technologies.”

This is true. Some call tactile varnish “raised spot UV.” Some call it “Sense.” Some name it “3D,” and some refer to it as “Dimensional.” Yours truly even refers to it as “Taktified print.” Printers may also add their own brand name for marketing purposes, so by the time it gets to the designers they don’t know what to name the effect if it’s going out to bid. That’s just for varnish, before considering all the different type of digital foils and other effects.

Mark C. Little, the senior manager of marketing and business development at Ricoh USA, agrees that digital embellishment file setup is critical for smooth workflow and can be a technical hindrance if not appropriately addressed from the beginning.

“When embellishing print beyond the traditional CMYK, such as clear, white, neons, invisible red, gold and silver – creating the appropriate print file layering structure is critical. Designers must know how to set up the file correctly, in

order for it to be seamlessly read and understood within their print workflow or RIP software. It can also be beneficial for designers to use techniques such as creating a 'New Color Swatch' in Adobe InDesign or 'New Spot Channels' in Adobe Photoshop and be adept at creating artwork layers, background layers, and a

fifth color spot layer in their file documents. These are some key proficiencies designers should develop to help avoid any issues when it comes to preparing accurate print-ready files."

Little also stressed the need to use a PDF format that supports embellishment content.



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**Front**

- 1 Silver foil
- 2 Gold foil
- 3 Green foil
- 4 Purple foil
- 5 Blue foil

**Back**

- 6 Holographic Silver foil
- 7 Varnish overlay

**Pass Order (8 passes)**

- Overlay artwork: Generated every mask in Photoshop CC using brushes and filters.
- Wave spray (for all foils on front wave): Kyle's Spatter Brushes - Supreme Spatter & Texture
- Varnish overlays (both front + back) and moonlit water on back: Filter Gallery > Sketch > Photocopy2.

**Print Stats**

9 x 6" postcard  
 Printed 4/4 digital on iGEN5  
 Embellished on MGI JV3DS

Artwork Provided By Matt Redbear from Blue Ocean Press in South Florida.



The main programs that I use for our embellishing processes are Adobe Photoshop and Adobe Illustrator.

The process for creating the effect you want is incredibly easy. Most projects usually don't need more than one or two passes through the I-Jet for final results. If you are comfortable with Adobe products, creating eye-catching images for the I-Jet will be a breeze for any designer. Just have fun and play with textures and masks in either of these programs. You can varnish or foil anything from hand-drawn sketches to photos of products or people.

First you'll need your design idea and how you want to execute it.

For the Koi fish, I drew out my design in Illustrator. I knew I wanted a yin and yang type of design and decided to alternate the details in two different foil colors, gold and silver. I had to create three layers in Illustrator and figure out the order in which the embellishments would be placed. From there I saved each layer as a PDF and opened them in Photoshop. I had to convert each drawn-out design into gray scale and save them as .tiff images. Once I had my three separate .tiff images, I placed them into the I-Jet program and set up my files for embellishing.

You can get super creative and have as many passes as you want. Keep in mind the type of coated substrate you want to use, and make sure it can handle multiple passes.

*Artwork Provided By Rebecca Arnett from Spectrum Printing Company in Arizona.*

"The PDF/X-4 file format is a more desirable format when compared to the PDF/X-1a file format because it allows the file to carry color spaces, transparencies and optimal content – layers which are then effectively passed on to the RIP."

April Lytle, the regional marketing manager at digital embellishment press maker Scodix, feels that designers have a hard time because it's still seen as a relatively new technology.

"Designers had to learn all the rules of analog decoration, but now it's layered with the multitude of effects directly at their fingertips," she said. "There is so much potential for experimentation that it can be overwhelming, especially when you start combining features like raised UV over flat foil, which mimics micro-embossing. Also, they now have the added bonus of variable designs and data potential. The nuance of learning the different decoration applications, how they work together, how they

can be manipulated into amazing design, takes time and skill that even veteran designers stumble with at first."

Matt Redbear, head of creative at Blue Ocean Press and operator of a digital embellishment press, said the challenge goes even deeper and comes down to designer education on the creative side.

"One of my biggest challenges is trying to figure out how to embellish a piece after it's already been designed by another designer. What is their angle? What complementary graphics can I use? How far can my design depart from their original look? I never have the answers to these questions.

"As you know, designers have egos, and in turn can be very upset when their artwork is misinterpreted. Also, if it's coming from a corporate level, I won't necessarily have access to brand guidelines for proper use of logos, artwork etc.

"I can only see two ways around this.

First, the long-term approach is to re-educate art directors to work with their teams on how embellishment can be applied during the design process. It requires a little more imagination — spatial thinking with regards to three dimensions.

“Who is traveling around teaching embellishments? What about teaching the techniques for print embellishment on a two-dimensional substrate in today’s art media courses? Secondly, the short-term approach is for embellishment designers to co-create with the designers during the development process. This seems to never happen, in spite of my best attempts to make it so. I don’t understand why.”

One of the people that is already out there beating the drum on designer education is Mark Geeves, co-founder of Color-Logic, which licenses its metallics effects system to PSPs. He agrees that education is key, but also having the right tools are important to help bridge the potential educational gap.

“First off, many of today’s designers do not receive formal training in working with print, most are focused on web-based design,” he said. “Perhaps some of the issues lie here. Even fewer are trained on how to work with metallic embellishments. Once creative designers realize what is possible, have access to the necessary tools, and start building experience, it is amazing what they can produce. This is why we started Color-Logic in the first place.”

But not everyone feels the same way. Deborah Corn has a background in the agency world and now runs educational events like Project Peacock, trying to connect manufacturers to print buyers for educational purposes. She refuses to concede that



the obstacles printers who offer digital embellishments face, come from the designer or brand side.

“The agencies and brands aren’t the ones who bought the technology and offered it as a service, it was offered to them and therefore the responsibility is on the PSP to create users for it. It starts by telling them it exists. From there you show what can be created, who they can partner with to execute, and resources for how to use it – if they are available.

“I don’t understand anyone who invested in equipment sitting back and waiting for customers to figure out how to use it. Hire a trainer, do lunch-and-learns, create video and written tutorials. Let the designers learn how they wish, and have someone they can ask questions to that speaks their language. I would pay a designer to learn everything they could about the machine and file creation. Then I would hire them month by month to go to every customer file creator to talk designer to designer and show them in an actual file how to set everything up.”

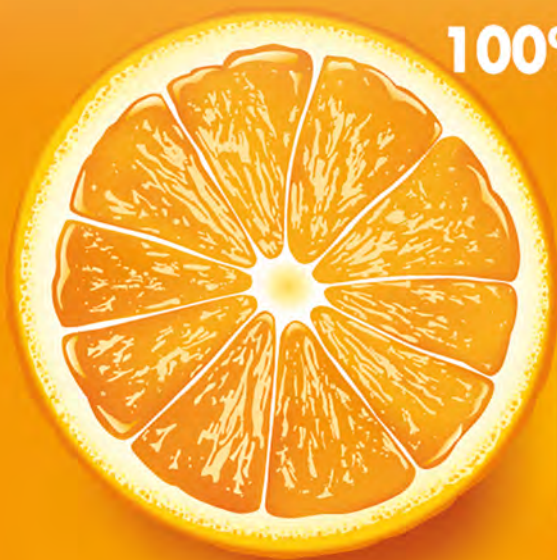
With all of these expert opinions, what is the right way to make it easy for everyone to design for digital embellishment? As of today, there is no secret “easy button” for designing accurately the first time around for digital embellishments. Most PSPs have to resort to either re-designing the art files internally, or offering design services to agencies and brands. While this is probably the best way to create good files, it is an added expense, which may impact prices and turnaround times. The biggest advantage is that PSPs

*Continued on page 69*

*Kevin Abergel is the Founder and President of taktiful ([www.taktiful.com](http://www.taktiful.com)), the digital embellishment sales and marketing specialists. His mission is to make digital embellishments and luxury print the obvious choice for all brands.*

# DIGITAL EMBELLISHMENTS

*How to add value – and  
profitability – to ink on paper.*



**100% N A T U R A L**

# RANGE



**T**he print industry is ever evolving and adapting as a communication channel. New technologies, like digital embellishment, allows printers to embrace the power of touch by creating enhanced, desirable, memorable and valuable brand experiences. And when there is perceived value, there is a willingness to pay a premium. Yet many printers continue to treat print as a commodity, selling primarily on price, and boasting about equipment features, speeds and feeds.

While the print industry can be resistant to change, the pandemic became a catalyst to invest in equipment, optimize workflows, build W2P/e-commerce portals, and seek out new, lucrative revenue streams.

PSPs who have yet to embrace newer digital solutions are missing out on opportunities that have become money-makers over the course of the pandemic.

Food delivery and e-commerce – particularly retail e-commerce – exploded, significantly increasing the demand for packaging as a result. However, a study conducted by Taktiful, the digital embellishment sales and marketing specialists, showed only 5% of brands consider packaging as a growth enabler, despite the fact that digitally-printed packaging

is proven to be the second most effective media channel – only after video.

Here are three opportunities for PSPs to add value – and profitability – with digital embellishments.

### Capitalize on the Science of Touch

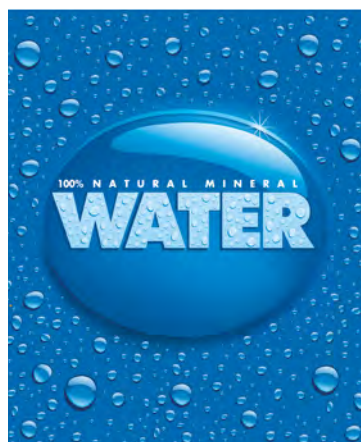
Humans like to touch things. It can spark and influence emotion and is proven to provide the strongest sensory recall. So it should come as no surprise that enhancing print with elements that make people want to touch it even more, can even further strengthen the effectiveness of packaging and labels.

The big brands get it, recognizing how enhanced packaging and print can heighten the sense of a product’s luxuriousness and thus value. They are witnessing more brand connection and recall thanks to the power of touch and aesthetics. And they are observing enhanced print sell between 24% and 89% more than non-enhanced print.

The pandemic’s effect of moving most of the buying journey online has accelerated the shift away from “informational” print – which can easily be migrated



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online – to “impactful” or memorable print, that provides a distinguishing value-add for brands looking to stand out and be remembered.

Presently, the prevalent applications for digital embellishments focus on the feel of sexy, luxurious print to create a lasting brand impression and experience in consumers’ minds. In particular, 3D varnishes, braille and gold and holographic foils are what’s hot today.

The trends driving demand for digital embellishments empowers print to be positioned as the high-value, touch-oriented communications channel it is – and empowers PSPs to sell that added value.

One of the earliest digital embellishment techniques, sleeking involves heating up black toner and using pressure to adhere foil to it, creating a gloss, matte or metallic finish. It can even replicate spot UV. While this technique isn’t the most efficient, it’s relatively inexpensive, making it a good fit for printers who want to dip their toes into the world of digital embellishment without breaking the bank.

### Extend Industry Boundaries

Do you have clients in the automotive industry? A recent white paper from the Foil and Specialty Effects Association (FSEA) showcases an embellished direct mail campaign created for Jeep. Knowing that the target market for Jeeps tend to be the outdoorsy type, the company produced 250,000 mailers that optimized its use of embellishments to make it look and feel like a camper’s backpack - including the zipper.

The relatively new cannabis industry has lit up with embellished packaging – be it gold debossing or holographic foil – as a way to exude a premium look to consumers, as well as enable micro-brands to capitalize on their share of shelf space.

One such company that has taken advantage of this trend is DMS Color, with their Gold Leaf Packaging e-commerce storefront, dedicated to the production of premium, enhanced collateral, packaging and branding for cannabis products.

The decreased costs of creating digital prototypes is especially appealing to micro-brands, start-ups and established brands

testing new products and markets.

For example, Virtual Packaging is a company that creates digital 3D packaging renders so that you don’t have to spend thousands of dollars between the initial printed prototype and the final one that makes the client happy. Instead, printers can digitally render them for a fraction of the price, as well as control costs and inventory.

### Invest Wisely

To determine the digital embellishment solution that suits where you are today – as well as where you plan to be – you need to know who you’ll be selling to, what it is that you’re selling, and the value that it brings them.

Comb through your CRM with your sales reps, CSRs and account managers, for opportunities to have value-based, customer conversations around prototyping, shelf appeal, brand recall – and the unboxing experience. Once you know which markets you’ll be servicing, you’ll be in a good position to start researching what equipment is right for you.

In addition to add-on finishing equipment, the popularity of “all-in-one” presses is on the rise to tackle a variety of different applications in one pass. A digital enhancement press can cost as low as US\$80,000 to hundreds of thousands, depending on what applications, sheet sizes, materials, substrates and functionalities are desired. The cost of consumables, like foils, varnish, special inks etc., needs to be budgeted as well.

Once you’ve decided on the equipment, then it’s time to invest in your sales and marketing – with a go-to-market plan, as well as training – not just on how to use the equipment, but how to sell it. After all, when it costs you 5 cents per sheet, and your clients are willing to pay a dollar, the profitability comes from your margins, not volume. Price accordingly. ●



*Joanne Gore is founder of Joanne Gore Communications. She has spent the last three decades helping companies maximize their marketing and communications efforts. Contact Joanne at [joanne@joannegorecommunications.com](mailto:joanne@joannegorecommunications.com).*

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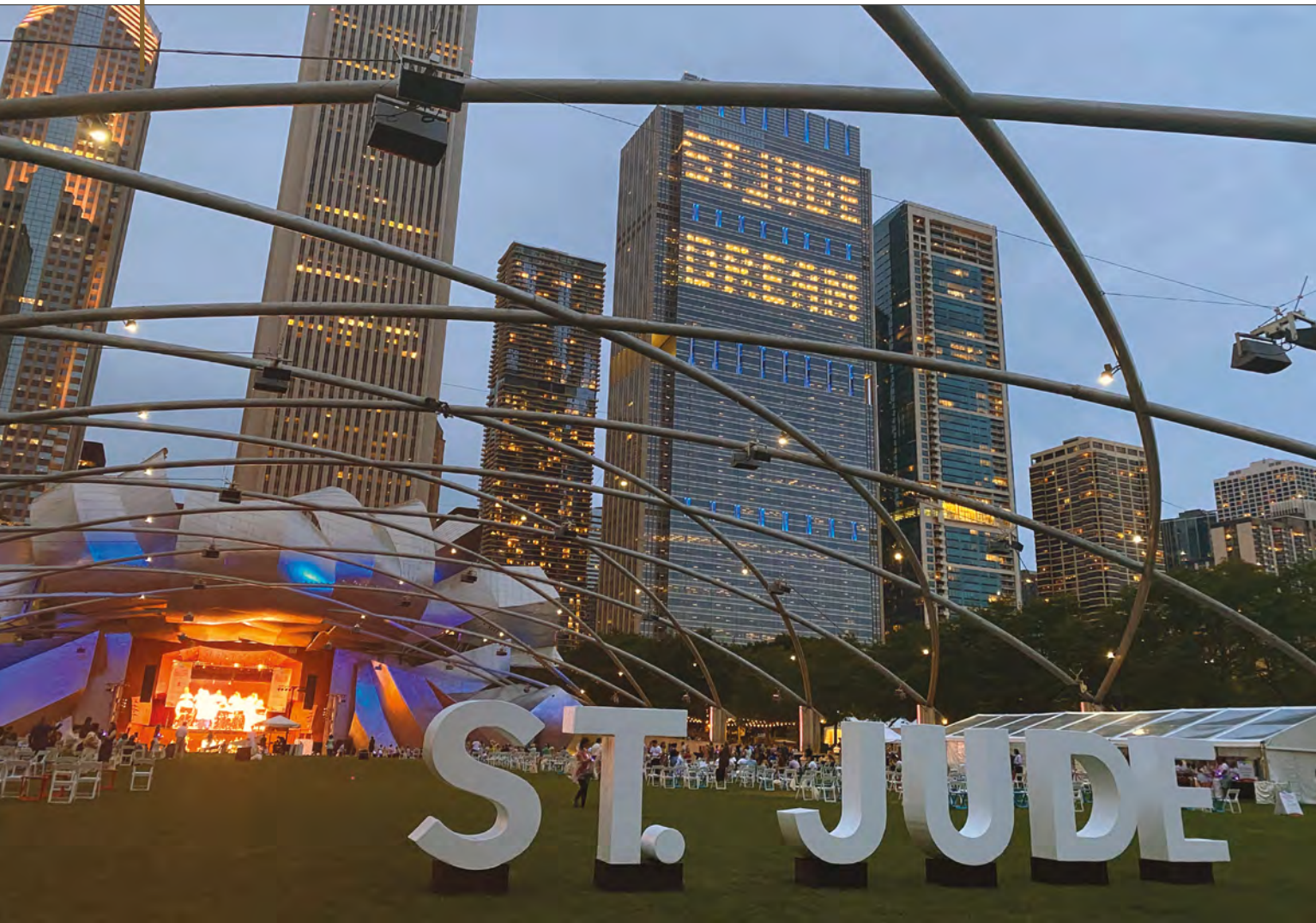
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# WhatTheyTh!nk

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# BRINGING A DREAM TO LIFE

*SpeedPro helps create massive “Dream Chicago” event for St. Jude.*

*By Eric Lazar, President & Owner of SpeedPro Chicago Loop*

**S**peedPro partnered with St. Jude Children’s Hospital and Arena Partners on the immersive “Dream Chicago” event, which raised more than \$1.7 million for the cause and landed SpeedPro Chicago Loop the highly-coveted title of “Project of the Year” in first place out of 122 SpeedPro locations.

“Dream Chicago” would be the first major Chicago event held since the beginning of the pandemic. And as the first in a planned annual series for St. Jude, it needed to make a big impression.

How big? Its requirements called for more than 4,000 square feet of printing, spread across a swath of the 24-acre Millennium Park in Chicago. Taking place on Aug. 8, 2021, it would accommodate over



1,200 guests, vibrantly showcasing the mission and achievements of St. Jude while offering the best in Chicago food, fashion and entertainment, including a special performance by The Temptations.

To rise to this massive endeavor, St. Jude partnered with SpeedPro Chicago Loop and studio owners Rebecca Considine and Eric Lazar.

“Our mandate was to help create a truly immersive and one-of-a-kind experience for guests,” Lazar said. “As the first ‘Dream Chicago’ fundraiser, we knew that the graphics would be a big part of that experience – not just printing them, but installing them in coordination with other partners.”

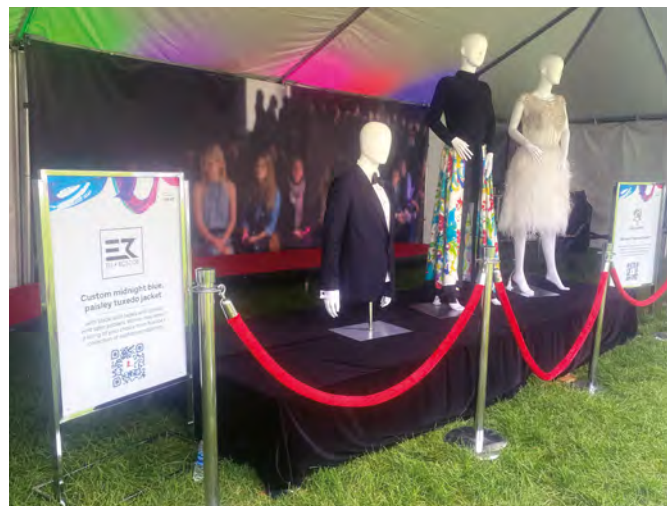
Requiring a full 10 days to produce the 4,000+

square feet of materials, the process was driven by key areas of the installation.

The first was a descending staircase, with a piece-meal graphic wrap on the front of each of the 30 stairs. Together it created the effect of a multi-colored carpet leading into a 100 foot x 100 foot tent, the hub of an immersive St. Jude “Journey” experience. The tent itself was sectioned to create hallways and rooms – telling the story of St. Jude, the vision of founder, Danny Thomas, and the children the hospital is dedicated to helping. The entry room of the tent featured floor graphics, complemented by swirling light projections, adding multiple layers of spectacle to video introductions that played on jumbo screens.



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## WIDE FORMAT & SIGNAGE — SpeedPro Project Of The Year

Guests then arrived at the heart of the “Journey,” a lengthy 100 foot x 10 foot timeline wall visually telling the history of St. Jude using a giant banner, with boards suspended from outriggers to create dimension and call out key moments.

An 82-foot circular rotunda wall designed to make guests feel as though they were on the St. Jude campus had transitional lighting for day and night effects, centered around a replica of the St. Jude Thaddeus statue.

Along with a group of smaller tents, as well as

branded flags, banners, signs and other graphics, was one of the most complex elements of the event. An auction wall involved more than 20 boards in a unique configuration that was strung and suspended by fishing line to create a floating illusion.

With an event of this scope, SpeedPro expected the unexpected. Working in tandem with other vendors, their install team discovered that the truss systems holding up the curved graphic and timeline walls didn't have the desired stability to support the graphics. Complex adjustments to rigging, engineering and cutting by the install team were required under intense time constraints. This was preceded by some client/sponsor changes on the event day, requiring last-minute printing of more than 400 square feet of graphics.





Load-in and setup began close to 30 hours before, mainly concentrated in a 12-hour window, posing a logistical challenge that demanded a high degree of coordination with lighting, sound and structural elements.

While the event itself took place during hot and humid weather, the evening brought rainstorms, which made take-down slightly more challenging. As a veteran-owned business, SpeedPro Chicago Loop brought in nearly a half-dozen veterans to augment the team and support production, installation and takedown, going on to hire one of the vets into a full-time position.

A successful event by any measure, the inaugural “Dream Chicago” raised more than \$1.7 million for St. Jude, with the second-annual event planned for Oct. 1, 2022.

SpeedPro Chicago Loop is again engaged as the printing partner.

“We are proud to have risen to the initial challenges of this huge event last year,” Considine said, “and look forward to bringing our experience to the next one in little more than five months.”

SpeedPro Chicago Loop is a bespoke large-format printing franchise with 122 locations in the U.S. offering custom event graphics, environmental graphics, experiential marketing activations, signage, digital displays and more. [www.speedpro.com](http://www.speedpro.com). ●





# Raspberry Creek FABRICS AND custom printing



Justin and Diana, founders of Raspberry Creek Fabrics.

## TWO STEPS FORWARD

*Raspberry Creek Fabrics patents a unique process for digital textile printing*

By Cary Sherburne

In July 2020, in the heart of the pandemic, we wrote about how Utah-based Raspberry Creek Fabrics implemented automation into its fabric printing process to streamline operations and increase profitability.

Now the company has gone a step further, receiving a patent for a unique web-to-print software for roll-to-roll fabric printing. This automates the step-and-repeat process in a way that creates the smallest possible file, speeding the printing process for a company that prints thousands of

step-and-repeat designs on more than 30 different fabric types with orders ranging from a half a yard to more than 100 yards.

Co-Founder Justin Rammell sat down with us to explain the process.

**WhatTheyThink:** So remind us how you, as an attorney in the oil and gas business, got into fabrics in the first place.

**Justin Rammell:** My wife, Diana, grew up on a ranch in Wyoming, and she loves to sew her own clothes. She has even sewn her own swimsuits.

But when she went to the fabric store looking for fabrics for her projects, she could not find anything that met her needs.

She said, "I want cute prints for my kids and I want to sew."

And so she started doing some designs; we had them screen printed, and she started selling on Etsy and it kind of took off. That was about 10 years ago. In April of 2017, we bought a Kornit Allegro and started doing our own printing. And then we added an EFI Reggiani NEXT dye sublimation printer for polyesters. We also purchased a Zund cutter.

**WTT:** *That's a pretty impressive portfolio. When we spoke a couple years ago, you talked about the process you went through to automate your production, and it sounded like that was going pretty well. What issues did you continue to have that drove the solution you have now patented, which was published as U.S.11275532 B1?*

**JR:** Our biggest problem was how time-consuming it was to process files. Looking at the orders at the end of the day, you might see, for example, five yards to print on cotton jersey, three yards of swimwear with sunflowers... basically a hundred orders a day with a half a yard here, three yards there and 30 different fabric types with many different patterns to print. It was a total nightmare. We were running two full shifts a day.

**WTT:** *So how did you approach finding a resolution?*

**JR:** We needed to figure out a way to step and repeat files that had already been ripped in order to reduce the processing time. We talked with many of the best-known printer and RIP manufacturers, and they all said they could do this, but they were not able to deliver. All of them wanted to do the imposition of the images up front, but that creates a huge file that takes forever to RIP – like a 200-gigabyte file for 10 yards of a print. It's just a mess. In many of their installations, that process works since they are printing 200+ yards at a time of the same pattern, but when you have 200 orders a day ranging from half a yard to who knows what, it's just not feasible.

**WTT:** *So what happened next?*

**JR:** I had an idea for a software patent, and I

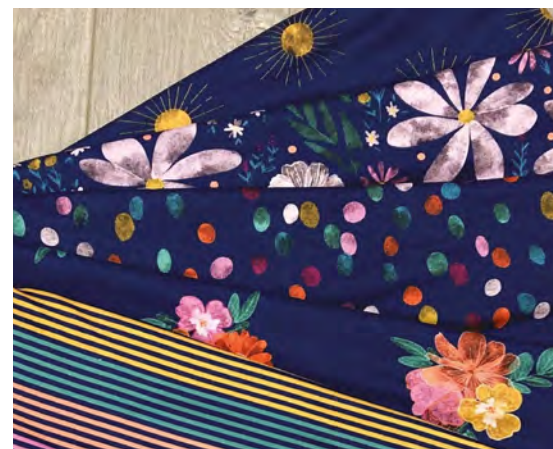
talked it over with a cousin in the software business out in San Francisco. She discouraged me, saying it was really difficult to get a software patent these days with the Supreme Court tightening the rules. But she did introduce us to a top patent law firm in Washington D.C., and while they couldn't give us any guarantees, they were willing to try. And they were able to get the patent published on March 15, in about eight months.

**WTT:** *That's incredible. So tell us what this process does.*

**JR:** So what we do is send one repeat of the pattern through the RIP. After it comes out of the RIP in the smallest possible size, we intercept the



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file and insert the customer order information as XML code. When the file hits the printer, the printer workstation reads the XML code and knows it needs to step and repeat the file for 50 yards or whatever the amount is. So instead of trying to push a 200 gigabyte 10-yard file through, we are putting a two-megabyte file through, because at that stage, doing the step-and-repeat process doesn't take any computer resources at all.

**WTT:** *But then how are you managing the orders so you aren't constantly changing out fabric types?*

**JR:** The beauty of this process is that the printer operator has a dashboard and can see, for example, that they have 1,000 yards to print, and they need to do 100 yards of it in cotton jersey. All of the jobs are pre-ripped and just waiting in the cloud, so they



push print for 100 yards of cotton jersey. That's all they have to do. The jobs come in from the web into hot folders and into the print queue, and

they print automatically one after the other.

Another nice feature of the software is that each file prints a header with our logo, the customer name and order number. That's been a big advantage, because before, the printer would spit out, for example, five yards of a sunflower print, and when it got to fulfillment, they were never quite sure what to do with it. So now, there are two or three wire racks for every day of orders. They are organized by order number and the fulfillment people know exactly where each one goes because each print is labeled.

**WTT:** *In addition to faster print production, the streamlining in fulfillment must make a big cycle time difference as well.*

**JR:** Absolutely. Actually, we had two fulfillment people quit, life changes – one went to college and the other relocated because of her husband's job. And we didn't need to hire anyone to replace them. Not only do we now have less staff, we are down from two shifts to one and shipping out a higher volume of orders. We are a husband-and-wife team with about eight employees, and we generate all of our designs ourselves. We need all of the efficiencies we can get.

**WTT:** *Is there anything else this process is enabling for the business?*

**JR:** Yes. We are introducing "Artist Studios" so that any designer can upload images to our website to sell for a royalty. The system is in testing now and will go live in a few weeks. They will have full control over their designs, see the customer order information, track sales, and get paid automatically through PayPal. Their page will have their profile pic and social media information.

**WTT:** *Who did the software development for you?*

**JR:** We hired a couple different outfits to do different aspects of the development. But the core coding was done by Mitko Medev. He didn't know anything about fabric or ripping, but he is a really smart guy. We paid him as a contractor, but I also put his name on the patent since he was so integral to the success of the process. We wanted to give him that recognition. Another friend of mine, who is a software developer, looked at the code and remarked how elegant it was. The end result is this web-to-print software where nobody has to touch a file.

**WTT:** *What's next for Raspberry Creek?*

**JR:** Right now we are printing natural fibers with Kornit systems because of the trouble involved with pre- and post-treatment. We have been experimenting with different inks and processes to treat in-house. We are still looking for at different options right now, so if any of your readers have ideas, they could reach out.

We are also going to start doing more cutting. So for example, a customer who's making a hoodie can order the pattern printed in their size with the design they want, and then we can cut it and send them the pieces for sewing. We can place the cutting marks in our files, and we have automation in place that allows us to integrate cutting.

The nice thing about this automation system we have in place is that it is scalable. So we could put a printer anywhere in the world and plug it into our system to do automated printing. I believe that will help us break into the home textile market. ●



*Cary Sherburne is a well-known author, journalist and marketing consultant whose practice is focused on marketing communications strategies for the printing and publishing industries.*



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# FUTURE WORKFORCE

*Recruiting the next generation*

Supply chain issues abound. While the immediate focus is on the paper shortage, the other crisis is the labor supply chain.

Supply chains only work to the extent that there are no kinks in the chain. In the case of labor, not only is there a shortage of raw material (potential workers), but there is also an erosion of manufacturing (e.g., printing and other graphic communication educational programs).

In the pre-pandemic years, the number of printing programs were in decline due to lack of interest and budget. We have been unsuccessful in attempts to reverse this trend. It appears that the latest casualty is the well-known graphic communications program at the University of Wisconsin-Stout. How can we expect administrators to fund programs, at any level, if there are no bodies in seats? Clearly, if we do not find a remedy, our fate is predetermined.

So, what are we to do? The key is attracting people, the first link in the chain. We have to get beyond and ahead of such things as merely offering scholarships, because while they certainly help students already interested in the industry as a career, they are only as good as there are interested people. The problem is that we are not attracting enough “interested” people.

On one hand, trade associations, like mine, need to fulfill our charter to promote the industry. We do not need to tell the industry about its great value. We need to address the public, young and old, and explain just how essential printing is to their daily lives.

I have talked to leaders in a couple of 2- and 4-year graphic communications programs in California. The evidence is that the initial draw is not to printing but to graphic

arts or graphic design. However, the programs that include an introduction to printing in the curriculum see a certain set of students become interested in the actual production of art. These students will likely find their way into industry.

Many would quickly say that these students are but a drop in the bucket, and the shortage is in entry-level candidates. These young people are going to originate from our high schools. To make an impact, printers have to proactively create local outreach activities.

We pursue customers through various targeted marketing campaigns. Printers need to consider grassroots efforts to market the industry in their local communities.

In today’s world, we provide multichannel marketing to our customers to help them attract their customers. It is time that we, trade associations and printers, use the same marketing techniques to attract our “desired” customer ... next generation workers.

Print is all around us. We need to build public awareness of its value in order to build attraction. We need to demonstrate that printing is not the archaic ink-under-the-fingernails process it was decades ago; it’s a hi-tech business.

Strangely, print is not obvious even though it surrounds us in almost everything we do. Let’s help make it more obvious. Let’s help students and parents imagine a world without print, and then challenge them to ensure that doesn’t happen! ●



*Lou Caron is a CPA with extensive business experience in both the insurance and printing industry, and has served as the chief financial officer of companies in both industries. He is the President/CEO of Printing Industries Association, Inc. of Southern California.*



# IT'S TIME TO GET AMPED FOR AMPLIFY!

*Have you registered?*

**A**mplify, the Print Finishing and Embellishment Event, is a collaborative undertaking presented by the Association for PRINT Technologies (APTech) and the Foil & Specialty Effects Association (FSEA).

Taking place June 14-16, at the Minneapolis Convention Center, Amplify will be an innovative technology showcase for all involved in the print finishing and embellishment value chain.

The event raises the standard for metallic decorating techniques, folding and gluing, UV coating, laminates, laser cutting, binding, embossing, diecutting, direct mail, envelopes and converting by showcasing the brands, products, equipment, software and experts involved in the many processes in this growing sector of print.

## **Amplify Exhibit Hall and Technology Zone**

With strong industry support, the Exhibit Hall is now 95% sold out. The Amplify event floor will showcase the products and services of sponsors and exhibitors in the print finishing and embellishment

space, including Canon Solutions America, Scodix, Xerox, Bobst, Konica Minolta, Baldwin|AMS Spectral UV, Heidelberg, Duplo, Harris & Bruno International, Infinity Foils, Inc., and many more.

There is a lot of excitement surrounding the Amplify Technology Zone. This section of the show floor will feature live equipment demos and tech talks from sponsors and exhibitors, including KAMA, Absolute Printing Equipment, Rollem, KURZ Transfer Products and Skandacor.

Another differentiator is the Mailing Zone, sponsored by the Envelope Manufacturers Association (EMA), which will spotlight hot topics and trends in envelopes, direct mail and data service industries, from leaders in the envelope technology and supply segments, including Parkland Direct, Victor Envelope, Eukalin Corp., and W+D North America, Inc.

## **Educational Program**

Amplify's educational program is targeted to print finishing and presented by a prestigious lineup of presenters with a deep understanding of their market segment, including Kevin

# PRINT AMPLIFY

JUNE 14 – 16, 2022

The Print Finishing & Embellishment Event

Abergel (Taktiful), Trish Witkowski (Fold Factory), Sabine Lenz (PaperSpecs), Erik Norman (Bolger), Christine Yardley (Print Panther), Kary Radestock (Hippo Premium Packaging), Daniel Dejan (Dejan Associates), Chris Leary (Gietz/VinFoil), Deborah Corn (Print Media Centr), Andy Fiore (Standard Finishing Systems), and more.

Attendees will find best practices, discover emerging technologies, and hear real-world success stories that they can take back to their businesses and use to prosper. Experts in print decorating, binding and finishing techniques share their design inspiration, best practices and problem-solving tricks. Through the design and creative tracks, attendees will learn what they need to know to design for specialty print embellishments and bindery processes, including hot industry trends.

## Sustainability Summit

The June 13, pre-Amplify Sustainability Summit will be a three-hour program, fully dedicated to examining sustainability issues in print and packaging, especially around recyclability of products with special finishing applications. Presenters will include speakers, practitioners and experts from the American Forest

and Paper Association (AF&PA), Eagle Systems, FSEA, Diamond Packaging, American Greetings, KURZ Transfer Products and Channeled Resources.

## Events Within Events

Also incorporated in the Amplify program are the 29th Annual FSEA Gold Leaf Awards, where the winners will be revealed during a reception on Tuesday evening. Plus, a special Digital Embellishment Workshop on Wednesday, led by Kevin Abergel (Taktiful), includes a session on how to design and create accurate files for digital embellishments for print, and an event floor tour where attendees can see firsthand how digital embellishments are applied and executed.

Now is a crucial moment for everyone emerging from the pandemic. We've all had to pivot and adjust our businesses over the past two years, and now we're starting to see the way forward. Amplify can help us pivot and adapt for the future.

To register or learn more about Amplify, visit <https://amplifyprint.org/> or contact [info@amplifyprint.org](mailto:info@amplifyprint.org).



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HEAR FROM  
THE EXPERTS



KEVIN ABERGEL



SABINE LENZ



TRISH WITKOWSKI

# PRESS ON & ROCK ON &

RMGT's rock-n-roll themed "Commit to Print" World Tour, celebrating heavy metal and sheetfed-offset printing, kicked off earlier this month.

**C**elebrating sheetfed-offset printing, RMGT's "Commit to Print" World Tour kicked off in early May in St. Louis, Mo.

The rock-n-roll themed events are taking place in six cities, featuring seven plants and 10 sheetfed offset presses over the next six months. The U.S. arm of the tour culminates with live press demos in Las Vegas in October -- during the industry's big PRINTING United tradeshow.

"We conceived the 'Commit to Print' World Tour to allow regional events for printers to see our presses in a production environments," said Kian Hemmen, director of sales for Print and Finishing Solutions, RMGT's Western U.S. distributor.

"RMGT's commitment to live press demonstrations during large industry events continues in 2022 with the North American launch of our new 8-UP+ RMGT 970 offset press," added Graphco President Chris Manley. "Our ability to install an

eight-color, 8-up press for a three-day show is testimony to one of the additional benefits of the RMGT 9 Series press: the smallest footprint of an eight-page sheetfed offset press in the industry."

The new RMGT 970 press also features the latest in offset press technology

with instant LED-UV curing and greatly reduced makeready with the introduction of Automated Smart Assist Printing (ASAP). Over 80% of RMGT 9 Series presses running in North America are manned with a single press operator.

"We are thrilled that the 'Commit to Print'



## "COMMIT TO PRINT" TOUR SCHEDULE

May 5	St. Louis
June	Chicago
July	Lancaster, Pa.
August	Los Angeles
Oct. 19-21	Las Vegas
Dec.	Tokyo (at RMGT's world headquarters)

The RMGT Commit to Print World Tour kicked off in St. Louis! Advertisers Printing co-hosted the event for a day of printing, and a night of dinner, music, and prizes!

The events demonstrate live how automated, RMGT sheetfed-offset print technology is expanding the possibilities of high-quality, offset reproduction at commercial printers, packaging printers, trade shops and online printers across the United States.

"Commit to Print' allows us to showcase some of our newest press offerings," said Kozac Takata, manager of international sales/marketing for RMGT (RYOBI HMI Graphic Technology Ltd.), "such as the new 10 Series Performance Package and the new 970 press."



Mark Vruno, a Chicago-based business publishing professional, has reported on the global commercial print industry for more than 20 years.



The tour rolls on at night with dinner, drinks, prizes and some Rock & Roll for an experience you won't want to miss right in your area!

World Tour will have stops at plants that have recently installed the RMGT 10 Series press and the new RMGT 970 offset press," said Lloyd Molloy, director of customer service at RM Machinery, the RMGT distributor for Canada and authorized sales and service for new RMGT 10 Series and legacy Mitsubishi presses in North America. "By the time we get together at PRINTING United, we will have sold and installed at least four new RMGT 10 Series presses along with three of the new 8-UP+ RMGT 970 presses at packaging plants and commercial printers doing light packaging printing in the U.S. It appears that the RMGT 9 and RMGT 10 Series are the right presses, at the right price, at the right time." ●

## RMGT HELPS FILL THE CAPACITY

Founded in 1923, Advertisers Printing in St. Louis is a hybrid blend of print. Traditional, offset printing generates some 65% of its more than \$10 million in annual sales, while digital print jobs comprise the remaining 35%.

Running on the company's 7,000-sq.ft. production floor, Advertisers' 10-color, 9 Series perfecter (5/5), featuring LED-UV curing technology, was one of the first of its kind installed in North America some 20 months ago. The press was purchased through RMGT's Midwest/Southeast distributor Graphco and delivered in September 2020.

Senior sales VP John Heaney said that the commercial printing company employs 42 people running two full shifts – but only one and a quarter for the 10-color press.

"What the RMGT does is help to fill the capacity throughout our shop, including [in] our digital area," said Business Developer Alex Fechner. "This has been a really good synergistic situation, because the 10-color RMGT 9 Series press is equipped with LED-UV curing technology. We have more flexibility to print shells LED offset and then run those shells on our [20/29"] HP Indigo 10000 Digital Press to handle large, variable-data runs."

### Lean and Green Production

Why invest a million dollars in a new, efficient offset press? Think of the decision as a down payment on the company's future survival, Heaney said.

"Three machines [legacy presses] exited and were replaced by one," he said. "It frees up space and opens up square footage."

Plus, with the RMGT model, Advertisers makes ready on 10 units in 12 minutes, adding that makereadies on their old press used to take 90 minutes for half as many units.

Part of the economic justification involves labor hours, of course. For this union shop, the RMGT perfecting press' one-pass capability translates to nearly three times the throughput of its vintage six-color, 29" model.

"We now run in 10 hours what took 22 hours previously," Heaney said.

Heaney, who doubles as Advertisers Printing's sustainability director, likes the fact that the LED (light-emitting diode) technology employed by the RMGT perfecting press "has 1/10th the energy footprint of a conventional, arc-lamp UV press." As much as possible, he and the sales team discourage clients from coating their print jobs, even though the press has coating capabilities.

"Eliminating coating lowers a job's VOC [volatile organic compounds] footprint by 30%," Heaney said. "Ammonia, water and silicon are not harmless."

Heaney takes sustainability seriously, frowning on paper cartons, too.

"We request that paper orders be delivered in full skids whenever possible," he said.

Advertisers Printing is the first print service provider in Missouri certified by the Forest Stewardship Council (FSC) and the only printer in the state to be certified by the Sustainable Green Printing Partnership (SGP).



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John Heaney



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# FLEXOGRAPHIC TECHNICAL ASSOCIATION

By FTA leadership team

Since 1958, Flexographic Technical Association (FTA) has been enabling flexographers to grow their skills, connect with likeminded individuals, expand their reachable markets and drive flexography to package printing dominance.

FTA's members are from all segments of the flexographic industry, from tags/labels to flexible packaging to corrugated boxes, as well as other specialty products. They include printers, consumer product companies, manufacturers, pre-media service providers, distributors, educators, nonprofits and fellow associations/organizations.

Each year, members gather at Forum & Infoflex, FTA's biggest technical conference and exhibi-



Laura & Bart Wright

tion. Over the course of four days, attendees learn new techniques, get exposure to the latest technologies, network with other members of the industry and conduct business, all while solidifying an understanding of the fundamentals. They leave prepared to advance their companies to flexographic excellence.

FTA provides multiple other opportunities to further its members' professional development skills throughout the year.

Its annual Fall Conference is a condensed version of Forum & Infoflex where attendees connect and grow their skillsets. Every month, FTA hosts webinars covering a wide range of essential topics. FTA's books and publications are authored by flexographers, for flexographers, to make them more resourceful and capable. FTA's Technical



Education Services Team offers several types of instructor-led and self-paced educational programs. FLEXO Magazine is the official magazine of FTA and is a mainstay in every flexographic break room, supervisors' office and customer lobby.

FTA brings attention to the increasingly high-quality work flexographic printers produce with the Excellence in Flexography Awards, an industry-wide print competition held annually.

FTA's mission extends beyond the current generation of flexographers as it supports the flexographers of tomorrow. The Association awards tens of thousands of dollars in scholarships each year to students studying flexography and graphic communications. During the banquet, additional honors are given to students to recognize their achievements in the Phoenix Challenge College Competition. FTA encourages students to become members, allowing them to enjoy all the same benefits as their future industry peers.

FTA is and has always been a committee-driven association, and those committees are made up of members representing all segments of the industry. This close connection to industry members enables FTA to respond effectively to the needs of the flexographic community.

Throughout 2020 and 2021, FTA's membership and, in turn the Association, faced unprecedented circumstances, which forced the virtual format on all of us. FTA worked diligently and quickly to provide its membership with the same value and service for which it has been known. That has been the Association's mission since its inception in 1958. FTA's members make the difference, and the Association will always be a reflection of that fact. ●

*Continued from page 45*

There are many companies being established to achieve these goals. We will highlight only three of them here due to space constrictions.

BMC.Fashion, founded by Kirby Best and located near the Phoenix airport, includes two Kornit digital printers and four Gerber cutting tables. Best has distilled the manufacturing process to include the fewest physical touches, the most flexibility in sizing, and probably the largest use of robots for a truly innovative installation. He has a unique “seams-based” approach to training sewists, making it faster and easier to develop this critical talent, bringing it back to North America.

Founded by Justin and Diana Rammell in Salt Lake City, Raspberry Creek Fabrics not only offers direct-to-fabric printing using a wide range of designs, but has also patented a unique process for speeding up printing by automating the repeat process, which can bog down textile printers and slow throughput. The platform they have developed also lends itself to remote management, with a long-term vision of scaling up through establishment of multiple factories.

Catalyst Fabric Solutions, located in the Florida panhandle, was incorporated as a standalone company in 2016 to focus on on-demand production of interior and home décor as well as promotional items such as bags and backpacks. All of its printing is digital dye sublimation (heat transfer) along with a-sew operation. Its B2B customers can easily order through a portal for fast delivery (within 2–3 days) to end customers of blankets, towels, bedding, pillows, table linens and more. The company will also produce custom yardage on a variety of fabrics. Catalyst employs 200 people on average in its 300,000 square foot facility.

### A Plethora of Printers

Printer manufacturers are stepping up with increasingly innovative solutions for digital textile printing, including direct-to-garment, direct-to-fabric, direct-to-film and dye sublimation heat transfer technologies. We'll touch on the highlights here, again, due to lack of space, but applaud all of the

manufacturers who are working hard to add scale and quality to digital fabric printing, an important key to a sustainable future

Epson has had great success with its Monna Lisa direct-to-fabric printers in Europe and has very recently announced its first foray into direct-to-fabric printing in North America with the Monna Lisa 8000 digital direct-to-fabric printer, announced May 17, 2022. The printer can be installed with pigment, reactive, acid or disperse inks.

EFI Reggiani recently introduced three new printers: BLAZE, HYPER and TERRA Gold.

The EFI Reggiani BLAZE printer has been designed to give textile companies the opportunity to enter the digital textile printing market with a compact solution with cutting-edge printhead reliability and low maintenance costs for a competitive TCO (total cost of ownership) and smooth and precise material handling of knitted and woven fabrics.

EFI Reggiani HYPER is a model that—in a 3.4-meter size printing on two 1.5-meter rolls in parallel—can produce up to 20 linear meters per minute. That level of throughput is comparable to what some low-end single-pass textile printers produce.

And TERRA Silver with pigment inks is the latest addition to Reggiani's TERRA printers that replace water-intensive steaming and washing with using a highly efficient polymerization process that goes into effect as printed textile goes through the printer's on-board dryer. It's an ease-of-entry solution enabling more businesses to get into the industrial printing segment.

Kornit offers a wide range of direct-to-fabric and direct-to-garment printers and has recently been on an acquisition binge, adding workflow components to its total solution approach.



Epson Monna Lisa 8000

Kornit Atlas  
MAX PolyEFI Reggiani  
BLAZE.

Most recently, the company has acquired Tesoma, globally recognized for the high-quality engineering and performance of its cutting-edge textile curing solutions; Custom Gateway, UK-based provider of cloud-based workflow solutions for on-demand production business models; and Voxel8, whose advanced additive manufacturing technology for textiles allows for digital fabrication of functional features with zonal control of material properties, in addition to utilizing high-performance elastomers adhering to inkjet technology.

The company's goal is to build the leading operating system for on-demand sustainable fashion. The company also launched the Kornit Atlas MAX Poly system, a DTG solution for polyester and poly-blended apparel using Kornit NeoPigment Olympia inks.

Coloreel, while not exactly a textile printer, is still a technology well worth mentioning that is gaining steam in North America through its distributor, Hirsch Solutions. The company's solution dyes standard white recycled polyester thread on demand to enable embroidery of complex designs never before possible, using a single embroidery head. This is a technology worth watching as more units are placed around the globe.

Ricoh announced its first direct-to-film printer, an enhancement to the Ri 1000 or Ri 2000 DTG printers. This expands the range of fabric types these printers can be used for.



*Richard Romano has been writing about the graphic communications industry for 20 years. He is an industry analyst and author or co-author of more than half a dozen books.*

## WhatTheyThink TECHNOLOGY OUTLOOK



Mimaki TS330-1600

It offers more durability during washing cycles. DTF enables printing on cotton and synthetic fabrics without the need for pretreatment. It uses standard films and hot melt powder already available in the market. Existing printers are field upgradeable with software downloads. Operators can easily switch between DTG and DTF modes.

As mentioned in the signs section, Mimaki launched its TS330-1600 sublimation transfer inkjet printer with environmentally friendly ECO PASSPORT certified inks and a number of enhanced capabilities over previous members of this product family.

We expect to see continuing innovations in digital textile printers going forward, from these manufacturers and others.

### The Last Mile

While there has been significant progress in digitizing everything textile from design through cutting, sewing remains the "last mile" of automation and efficiency. Significant progress is being made in sewing automation, but most end products still require skilled sewists. Initiatives like ISAIC in Detroit, BMC.fashion in Arizona, and virtual training of both sewists and sewing machine mechanics using the Shimmy.io mobile apps are helping to grow the skills base in North America. We need more of these initiatives to bring more textiles and apparel manufacturing back to North America in any scale.

We covered these topics and more in our Technology Outlook Webinar on May 17. To access the archived recording—both slides and audio—visit [whattheythink.com/webinars](http://whattheythink.com/webinars). ●

*Continued from page 47*

already know from experience what the best visual result will likely look like, and they can also help control the cost of production by not “painting the sheet.”

Simon Eccles, a good friend of mine who has a long and storied history in print journalism, recently told me that previsualizers for digital embellishment are a key aspect to the wider use of digital embellishment.

“It’s always been easy enough for designers to set up effects by using layers in design programs – I first used Illustrator to create a spot-foiled magazine cover in 1989! Effects are all about catching and reflecting the light to give a shift in appearance for passing viewers. The real problem with designing for spot gloss or metallic effects is they can’t easily be previewed within standard design apps such as InDesign, Illustrator, Photoshop or any of their competitors. Even if a designer can mentally visualize the final result, there’s still the need to show it to a client who may not be au fait with embellishment. No standard digital proof printers can reproduce embellishments or tactile effects, though digital presses with metallic or special color toners can act as their own proofers.

“There’s a handful of software solutions already. Color-Logic offers a Mac-only on-screen previewer for designers called FX-Viewer. This can predict the effects of silver metallic inks, or white ink over silver foil substrates, by rotating the image to catch the light from different angles. It can’t predict spot varnishes or raised effects though.

“The 3D rendering previewers for packaging offered by Esko Studio Store Visualizer and Creative Edge’s iC3D (recently acquired by Hybrid Software) do a very good job with embellishment effects including embossing and varnish

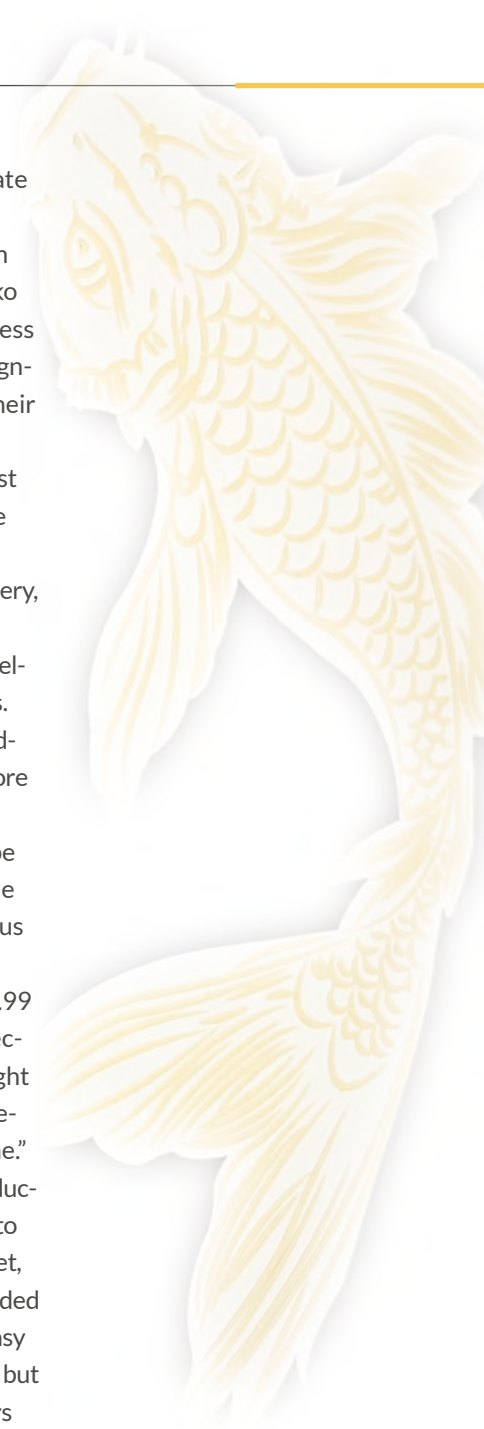
faux-embossing. They can even simulate holographic and diffraction foils. Both are relatively expensive though – from just under \$1,000 per month from Esko or from \$595 per month for iC3D, so less likely to attract commercial print designers who may only want to embellish their creations more occasionally.

However, if you could use a lower cost or free off-the-shelf 3D renderer for the relatively simple shapes of commercial print book and brochure covers, stationery, greetings cards and basic folding boxes and cartons, then it would open up embellishment to a much wider range of users. However, iC3D was created to be affordable too, so maybe it really does cost more to set up a commercial proposition.

“It’s interesting that this year Adobe Illustrator has gained some very simple 3D modelling and previewing tools, plus the ability to import some 3D models from the comparatively low cost (\$49.99 per month) Adobe Substance 3D collection. Illustrator or Substance itself might be tweaked to give foil and varnish previews, though I haven’t yet seen it done.”

What is clear is that in order for production to be streamlined and for volumes to grow in the digital embellishment market, an easy button for designers will be needed to increase mass adoption. What this easy button looks like can be anyone’s guess, but in an ideal world, in addition to designers actively being taught and trained on how to design for new technologies, there would be solutions that could affordably bridge the entire process, integrating e-commerce, file design, accurate 3D interactive previsualization, costing, and workflow. There’s a gap in the market for an enterprising developer!

So, who do you think should shoulder the load when it comes to teaching designing for new digital embellishment technologies? ●



Continued from page 27

## TRENDS AND OTHER FINISHING SCOOP

By Rick Salinas, VP marketing, Duplo USA:

“The trend toward B2 paper sizes is continuing to grow as printers strive to be more efficient and reduce costs. Equipment suppliers must meet this need with appropriate devices. Duplo will release no less than three devices in 2022 to meet this trend—one of which is a B2 spot UV coater with inline foiling.”

“Supply chain has had a large effect on all aspects of our business. It has made inventory control very important. Having a good understanding of trends is critical to put strained resources in area and products where they are needed. You do not want to waste a main board or motor on a machine that will sit in a warehouse for 6–8 months, when it could have been used in a much more popular device. Supply chain will also have an impact on current lines and product development. Products that have aged/sales have slowed may see a more rapid end-of-life to save parts resources for newer models.

**April Lytle, regional marketing manager US, Scodix:**

“Over the past few years, there’s been an awakening to sustainability being pushed down from brands and specifiers; a new involvement in their print workflow process that was not always stressed. More and more consumers demand that transparency and want the comfort of knowing their products were created with greener processes. Scodix digital enhancement equipment and software focuses on productivity, reduced waste and sustainability, and is the perfect answer to the sustainable messaging brands are asking for from their printers.

**Carl D’Aguiar, technical sales, B&R Moll:**

“We find ourselves complimenting the market more and more, especially with changes in the material supply chain, and with PET and plastics

becoming more and more difficult to obtain. We are seeing a massive push into cutting 24-point paper with coatings for CR80 loyalty/gift cards.”

**Galit Beck, senior marketing manager, Highcon Systems, LTD.:**

“With upheavals such as COVID-19, supply chain disruptions, and the demand for shorter lead times, it’s no longer just survival of the fittest, it’s survival of the quickest. Business that can adapt first to changing demands, will come out on top, and this means investing in solutions that help produce more jobs per shift with maximum efficiency and reduced waste.”

**Don Dubuque, director of marketing, Standard Finishing Systems:**

“Last year, we predicted that our successful pivot to a live virtual demonstration model would be used long after COVID travel challenges were a thing of the past. Our customers have been able to see specific applications run, often with materials they’ve shipped to us—and get their questions answered without having to travel to our national demo facility. This has proven true, as we continue to do many demonstrations virtually. However, customers have started visiting our demonstration center in-person as well, which is great to see.”

**Andy Fetherman, president and CEO, Muller Martini:**

“In all mature markets, the difficulty to find qualified personnel is a major challenge, and we see growth opportunities in products which are supported by digital transformation and in solutions which significantly reduce the need for personnel. In that respect there will be product launches in digital book production and hard-cover production as well as a new solution for digital saddle stitching in the months to come.”

printers the opportunity to enjoy much greater output and more automation. Moving up to peak-performance models, Heidelberg also offers the Promatrix 106-CSB (7,500 sph) and the recently launched Mastermatrix (9,000 sph).

Increased packaging volumes brings the need for more folding and gluing capability. The Diana GO

85 and the Diana Easy 115 folding carton gluers from MK Masterwork offer high productivity, user-friendliness and easy changeovers. When compared to the lighter and much simpler plough folders common in commercial print, packaging customers find that the Diana machines offer greater flexibility, performance and speed. ●

Continued from page 36



MGI AlphaJET

finding and holding employees in these labor-intensive applications. Robots to the rescue!

While a few years ago this would have been considered a joke, today there are many companies that will tailor robots to do all types of manual processes from moving paper to feeding finishing machines. Surprisingly the costs are becoming very easy to justify and ROI. In many cases if there is a laborious task that requires an employee over the course of two shifts, the ROI can be less than two years.

## Industry 4.0 (i4.0)

We have been talking about connecting supply chains through industry 4.0 and the ubiquitous cloud. We are finally seeing solutions from many of the hardware manufacturers and others. These solutions include various AI functionality and reporting and are getting more sophisticated as more machine data is being logged into the cloud. If there is a looming problem it is that each vendor is doing it on their own without any real standardization other than programming languages like XML, JSON and individual APIs. Since almost all production facilities have disparate solutions, this will undoubtedly create integration challenges.

## Acquisitions and Partnerships

As packaging continues to change and grow, the opportunities for development increase and become more attractive for investment. While acquisitions are not new, as a result of growth and consumer demand changes, we are starting to see lots of partnerships, joint development, rebranding and acquisitions of equipment and software companies in the packaging ecosystem.



Domino x630i

The recent acquisition of Edale Ltd. by Canon could provide a new flexibility to develop a wide range of label and flexible packaging production systems. As does Afga-Gevaert, recent acquisition of Inca Digital Printers, previously a part of the SCREEN Graphic Solutions Group which also has the potential for significant new product and solution development. In software, we saw the acquisition of IC3D by the expanding Hybrid Software (formerly Global Graphics), which is increasingly becoming the platform of for inkjet system development for many as a result of their integrated and highly productive Smart DFE.

Partnerships across equipment vendors offer quicker time to market and reduced development cost and load, and it is increasing. Durst and Omet, Heidelberg and Ricoh, Durst and KBA, Xeikon and Shenzhen Hanway, Domino and Sun Automation Group, Mark Andy and Domino, the list goes on and on. These partnerships allow manufacturers to add value and “tailor the press” to their requirement beyond just painting them. ●



*David Zwang specializes in process analysis, and strategic development of firms involved in publishing and packaging across the globe. Contact him at [david@zwang.com](mailto:david@zwang.com).*

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# GROW YOUR OWN

*Get creative to find new talent.*

**U**niversity of Wisconsin–Stout, nestled in Wisconsin's picturesque Northwoods, recently announced it is suspending admissions to its Graphic Communications program. I've heard rumors that Ferris State University in Michigan and Ball State University in Indiana have similar plans. I'd be happy to discover that these rumors are unfounded, but I fear the worst.

In the immediate vicinity of my printing plant, the local high school, the vocational school and the local community college have all eliminated their printing programs.



Politicians, boards of education, and of regents, and the administrators who nominally report to them don't see print as a glamorous career path. What a shame.

Students pursuing careers in print are much more likely to land successful positions upon graduation than their counterparts who've majored in

such bright shiny objects as web design, gaming or computer science. Unfortunately, I'm preaching to the choir. In my experience, educational institutions have little interest in reversing the trend of phasing out graphic arts programs. What to do?

Vocally and actively support graphic arts education in your area at the secondary and college levels. I also encourage supporting the Graphic Communication Education Association. They are supporting you! A bronze level membership is only \$100 per year.

All that said, here in the 21st century you are largely on your own. You can no longer count on a steady stream of applicants from trade schools and universities. The solution? You must cultivate your own talent.

Graphic arts programs may be

disappearing from vocational schools, but other programs, such as auto mechanics, are alive and well. These classes are populated by young people interested in the workings of highly complex micro-processor-controlled electro-mechanical devices, a definition which also applies to most of the equipment in today's print production environment.

Phrase job postings in such a way as to attract talent from non-graphic segments of manufacturing. Be prepared to hire production-inclined individuals and then train them in print-specific disciplines, such as color management.

Take a look in your own shop. How about that guy you hired to clean the restrooms who has no print experience but a terrific work ethic? Give him a shot. Invest some time in training him. See if he wants to improve his lot.

What about that temporary hire working in shipping who has been futilely seeking a position suited to his college major? He has already seen how busy you are and what a great place your firm is. He may be ready to reconsider his career path.

Don't be put off by superficial appearances. Do you have entry-level workers who are not proficient in English? Once again, look for the work ethic. English can be taught, and such tutoring is usually available locally at no cost to you.

Don't pigeonhole your people. Your folder operator already has an encyclopedic knowledge of layouts and a strong sense of urgency. Perhaps it is time to move him into estimating.

Not everybody wants to advance, but many do. This is your chance to turn the shortage of skilled workers to your advantage by building a team of home-grown talent. ●

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*Steve Johnson is a successful print owner and digital pioneer. Each month in Johnson's World, he offers up his take on the day-to-day world of graphic communications.*

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