



The article “Reworking Your Production Workflow” in the January/February edition of the SGIA Journal discussed how automating prepress-to-finishing workflows could help reduce time, errors and waste. Automation can also help maximize the number of jobs you can set up, produce, finish, ship and invoice every week.

This article is a follow-up to that article. If you successfully automate everything from your business management to your prepress, production and finishing workflows, you will someday be able to use all the data available to you to make better informed decisions about the potential return on investment (ROI) of future equipment purchases.

For now, though, many companies are still in the throes of migrating from analog to digital printing, and adding new digital capabilities and services in the process.

But before you make your next investment in expensive large-format graphics production equipment, it might be worthwhile to factor in some of the potential benefits of workflow automation when you calculate potential ROI. After gathering some insights from both vendors

and printing companies, here are a few things to consider when evaluating your next purchase.

Total cost of ownership is not the same as ROI. Total cost of ownership is a relatively straightforward calculation of the purchase or lease price of the equipment, ink, materials, operating and maintenance costs. Equipment buyers must feel confident that new equipment will pay for itself quickly, based on the selling price of the amount of work they can reasonably expect to run on it each week.

Maximizing the ROI is a more speculative calculation. Your total ROI will depend on how much profit you can make selling each square foot of output over the life of the equipment. An ROI calculation has many intangible variables, such as the size and loyalty of your current customer base and the business-development skills of your sales and marketing teams.

Your ROI is not determined by the speed and operating cost of a single machine, but rather the total cost of delivering finished products to your customers at the speed and quality level they expect. So, ROI also depends on the training and commitment

Is it time to adopt a more holistic, longer-term approach to planning equipment purchases?



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of your prepress and production staff, and your firm's efficiency, timeliness and accuracy in managing multiple decisions, details and deadlines.

Business owners cite different reasons for investing in new printing equipment. Each business may use a different formula for calculating ROI because they have different customers, business models, and long-term rationales for buying new equipment.

During this transition phase, some business owners don't order new equipment until they are certain they have an immediate need for the extra capacity or unique capabilities. Dolf Kahle, CEO of Visual Marking Systems recalls purchasing digital printing equipment so he could fulfill a customer's request for a project that couldn't be handled on one of Visual Marking Systems' screen printing lines.

Sometimes, it will become obvious that you can save money by printing jobs that you currently outsource. Kahle purchased an HP Indigo WS4600 so Visual Marking Systems no longer had to outsource the roll-to-roll printing of labels. Instead of bringing in flexographic equipment, he went digital.

Other companies buy digital equipment to replace analog equipment that has become too costly to operate and maintain. Jared Smith, President of Bluemedia says he starts considering new machines when older machines prove to be too slow to keep pace with the firm's requirements. Or, production glitches may be causing visible errors that waste time and materials. His company compares the costs of waste and lower throughput with the cost and benefits of new equipment.

Some firms buy equipment that enables them to upgrade to the level of quality and turnaround time that customers now take for granted. Replacing major customers who choose to take their business elsewhere can also prove time-consuming and costly.

Companies from the commercial printing sector are investing in large-format printers to become full-service providers of highly automated, data-driven integrated marketing services. Bringing the work in house will reduce the amount of large-format graphics that these firms (or their clients) currently outsource to large-format graphics specialists.

Maximizing the ROI of new equipment requires refining how you: (1) **Get more work from existing customers;** (2) **develop new business;** and (3) **reduce the overall cost of producing**

and delivering finished products. This is where Print MIS and automated production workflow automation systems can help. David Cranage of EFI compares a good MIS system to the beeping EKG system in an operating room.

As an MIS monitors the pulse of your business, you can use the data to diagnose potential problems early and take corrective measures. For example, the data will show if the pulse of your business is spiking to unhealthy levels in some areas and flatlining in others.

But the process of choosing and implementing an automated workflow system is much different than replacing one piece of equipment with a newer model. While many commercial printing firms and larger screen printing firms already use MIS and ERP systems for business planning, many of these systems weren't designed to manage modern printing operations. Nevertheless, the MIS systems are so integral to daily business operations that replacing them would be like surgically removing and replacing your spinal cord and nervous system. It would be risky, painful and would require some recovery time.

Choosing MIS and workflow automation systems also requires the support of multiple departments, including IT, accounting, sales and customer service. The decision shouldn't be taken lightly.

Profitably processing high volumes of short-run jobs on multiple devices can be time consuming when human decisions and actions are required at each step in the workflow. For example, managing color through separate RIPs can make it more difficult to achieve brand colors on different materials being output on different printing platforms.

Because higher-speed digital printing devices can be so versatile in the size and types of materials they can output, there may be times when you need to calculate the most profitable way to produce a specific type of graphic. And, if one piece of digital printing equipment goes down, you may need to shift the work from one printer to another, without sacrificing color quality.

Developing new business may take longer than anticipated. If you are buying equipment to expand into new markets, you probably want to target customers who are willing to pay more for products and ancillary services that are too difficult to handle in-house.

Steven Strooh, President of Beeline and Blue, was an early adopter of large-

format digital printing equipment in the 1990s and has been steadily upgrading and adding new equipment ever since. He says Beeline strives to be among the first to develop new types of products and sell them at higher margins before they become commodities. Strooh knows from experience that it takes patience and perseverance for new products to gain traction in the marketplace. But that patience is rewarded once word about the new product begins to spread throughout the design and graphics production community. Then Beeline gets referrals from the early adopters, says Strooh, "And the work builds for a particular device or product offering."

Right now, Strooh says many Beeline and Blue customers still prefer human interaction to online job submission, so workflow automation hasn't proven to be an immediate panacea. He says, "Customers are often years behind in terms of understanding the benefits of new ways of submitting files or using new products."

On the other hand, you don't always know where new business opportunities will come from. When businesses don't know where to turn for specialized types of digital printing projects, they often turn to the major digital printing equipment manufacturers for referrals. So, if your company is known as a reliable and creative problem solver (a "solutions provider"), your printing equipment manufacturer might refer some business your way. Or, you might meet potential new business partners at gatherings such as the SGIA Expo or equipment users' groups such as EFI Connect or Dscope.

Web-to-print operations might help you scale up. As businesses and consumers become more accustomed to ordering all sorts of products online, a growing number of designers, photographers, artists, authors and young entrepreneurs are using their talents to create and sell new types of products online. Many of these products are being produced and fulfilled by digital printing firms.

On websites such as Wall-tats (www.walltat.com) or PrintAllOver Me (<http://printallover.me/>) you'll see that the sophistication and visual appeal of custom-designed, print-on-demand products is rising. Another good example is The Kaisa Kay Art Projects gallery in Chicago, which has launched a line of fine-art wallpapers (<http://www.fineartwallpapers.com/>) created by contemporary artists.

Not all online design-business ventures

will succeed. But if you can help these creative entrepreneurs grow their online businesses, your printing firm will reap benefits. Younger designers and artists are already savvy in using social media and online marketing but they typically appreciate any marketing help they can get. They can also introduce you to other creative professionals seeking to launch online businesses.

If workflow automation doesn't factor into your initial decision to buy expensive new equipment, make it part of your longer-term equipment acquisition plan. "A well thought-out and executed business plan is essential for success in achieving your projected ROI," says Mark Gallucci, Manager of Technology Marketing at Agfa Graphics. "While some print providers will buy equipment for a specific order and recoup the cost of their investment in a single job, it usually takes much longer to achieve a full return on your investment. Web-to-print systems can generate significant new orders, and even new lines of business that will accelerate the ROI on your equipment."

At the 2014 SGIA Expo (Las Vegas, October 22–24), he demonstrated how printing firms could use Asanti Storefront to get new business. For example, if you sell graphics to a local bar, you can help that bar set up a website through which they can sell their own branded merchandise, such as posters, coasters, glassware or T-shirts. All of those orders, of course, would flow directly into your Asanti automated workflow.

Smith says his company's workflow is just about 100 percent automated, with centralized estimating, scheduling and RIP processing. Even the accounts receivable system is automated to send reminders. He says access to production data has made it easier to plan and justify new equipment acquisitions: "With accurate data of actual figures in hand, decisions become clear quickly."

To maximize the equipment ROI, Smith said, "We take training very seriously and make sure to overlap many people on the training. We also implement metrics to see how the machine is performing compared to our expectations."

Equipment manufacturers will call attention to cost savings, operating costs, or growth opportunities you may have overlooked. "Most printer manufacturers, if not all, have ROI tools that can help you decide which product will meet your current and future needs,"

said John Kaufman, Senior Marketing Specialist at Canon Solutions America. "Our sales team brings members of their Professional Services team along on every call." The Professional Services team will review and analyze your current workflow, color management and print MIS reporting system: "They will then provide a report pointing out where there is room for improvement with regards to your network, file management, archiving, color profiling, job cost reporting and more. Our job is to position a solution that will give you the quickest ROI possible. That includes the workflow."

One area in which costs are typically calculated incorrectly are ink costs.

Kaufman says, "A lot of customers focus on the capital cost of the equipment as the driving force of their equipment decision. They often only consider ink costs in terms of price per bag and not the real measurement, which is ink usage per square foot. This is where the workflow and media profiling come into play. The choice of workflow is critical here, specifically in regards to optimizing the media profiles to the equipment in your shop. Color gamut, speed, print mode and the type of media used all play a role in the amount of ink placed on the sheet."

Gallucci agrees that ink cost calculations are often under- or overestimated: "Printing firms may not realize the wide differences in ink consumption among different printers."

And, while labor costs are typically considered in most ROI projections, "The amount of time technicians spend reworking customer files due to RIP issues is often underestimated," said Gallucci.

In an article in the March/April edition of the 2014 SGIA Journal, EFI's G. Scott Wood noted that "Just like a vehicle purchase, the least costly option will not always be the best investment. Your return on investment (and ongoing profitability) is based on more than just initial cost." Wood advised equipment owners to "Consider your complete workflow carefully. You can often improve ROI and delivery times to customers by making finishing purchases in parallel with the printing device. The combination will often free up additional production time, reduce overtime, and allow more just-in-time output."

Other factors to consider include floor space requirements and the energy consumption of the printing, drying and finishing equipment. Inkjet media is also subject to frequent price changes.



Anticipate Unexpected Sources of Competition

As all types of businesses seek to become more efficient or diversified, don't be surprised to see them adopt new business models of their own. And clearly, online purchasing of all types of products is becoming more common. There is no such thing as "business as usual."

So, your ROI and business plans should include innovations and value-added services that will protect your company from competition from unexpected sources.

For instance, if you think Staples is simply an in-store provider of walk-up copy and print services, check out the Staples Advantage program and Staples online storefront for printing services.

Through Staples Advantage, businesses can not only purchase office supplies, furniture, technology, and safety and janitorial supplies, but also manage print services and a full range of printed products, including signs and display graphics.

The Staples Print Solutions division of Staples Advantage provides printing services to individual consumers and solopreneurs. Staples Advantage members and consumers can order business forms, business cards, letterhead, engineering documents, marketing collateral, indoor and outdoor banner and displays, yard signs and retail graphics. They can also purchase promotional products such as apparel, headwear, bags, coolers, and corporate gifts and awards.

"People don't think of us as one of the biggest printers in the country, but we are," says Jeff Crump, Vice President and General Manager of Staples Print Solutions. At their eight printing facilities nationwide, Staples Print Solutions operates a mix of offset, flexo, and digital presses, as well as large-format printers and finishing equipment. Customers of Staples Print Solutions can also utilize the company's premedia services, online ordering and proofing, and kitting and fulfillment.

In January, the Staples Print Solutions Division added an HP Scitex FB10000 Industrial Press to their facility in Cincinnati, Ohio. The new press enables Staples to bring its own retail signage program in house while providing a greater variety of options for enterprise customers.

"The HP Scitex FB10000 Industrial Press, in conjunction with our national fulfillment platform, provides customers with a scalable solution for their complex display and seasonal programs, and allows our customers to print a variety of large signs, banners, retail graphics and display applications on a wide range of media," said Crump. The HP Scitex FB10000 can produce up to 1,000 B1 sheets in less than two hours. HP Scitex HDR Printing Technology delivers dynamic dot-size control for precise color and tone reproduction and 16 gray-level printing.

While the workflows at Staples Print Solutions are highly automated and Staples is proficient at online marketing and data analytics, Crump said the decision to buy the HP Scitex FB Industrial Press was based on a clear need to add more capacity to meet the growing demand for fast-turnaround printing. He said, "We produce retail signage for both Staples' internal print business and contract print customers. Speed to market is important and having leading-edge equipment enables us to be flexible and versatile."

According to Cranage, when workflows aren't automated it can be challenging to calculate an ROI with spot-on precision: "We can provide a 'soft ROI,' in which we estimate what your savings will be within a certain range." But when workflows depend on people, a lot of your ROI will depend on their expertise, skill and efficiency.

Gallucci agrees that the labor savings associated with automated workflows are often underestimated. Companies often don't realize it until their automated workflows are implemented. He notes that without a well-defined plan, "Print providers that are expanding into new areas (such as wide format) may also underestimate their potential revenue opportunity."

Kaufman agrees many print-service providers tend to underestimate their growth potential: "Most companies look for a product that will meet their immediate or near-future needs and often underestimate the business growth that can occur when they bring new capabilities in-house."

Think Big

Companies of all sizes can benefit from adopting automation, said Cranage. If your company currently brings in around \$2 million a year, it's okay if you're still using the same QuickBooks and Excel spreadsheet tools you used as a startup company. But if you want to be able to scale up your operations to \$10 million or more each year, Cranage said you will need more automated business processes to remove manual touchpoints and the complexity of decision making.

If you are considering buying wide-format graphics production equipment this year, Gallucci recommends that you "Know your market and customers (current and potential), have a plan and clear vision of your desired outcome, and find a partner that will listen, understand, and help you get to your vision."

Avi Basu, Director of Market and Business Development of HP's Graphic Solutions Business, Americas, agrees that the most successful adopters of high-speed digital production equipment start with a well-thought out business plan. It doesn't have to be a 30-page document, but it's important to have a plan for execution and results measurements. This not only requires you to think through your manufacturing workflow, but the sales and marketing side of the ROI equation as well. He says "Success isn't as much about

the equipment you buy, but where your sales will come from. How much of your sales will come from existing clients? How much will come from new clients?"

"Companies that buy equipment to expand into new markets often fail to think about why potential customers should switch their business from one supplier to another," said Kaufman. When many companies are using similar equipment, "It's important to consider what services you will offer that other companies do not."

The wide-format graphics industry was built by specialty imaging entrepreneurs in concert with digital printing equipment manufacturers. They all invested a lot of time educating new customers, creating the demand for new applications and expanding the market. But Basu believes we are still in the early stages of the transformation from analog to digital printing. "We are still an industry of entrepreneurs. And we are not lacking in opportunity."

With its roots as an IT company, HP believes technology enables people to

innovate and dream big. According to Basu, "It's not just about providing a better way of printing, but a better way of delivering a service that lowers the overall cost of operation, maximizes uptime, and earns you more money."

"Advances in digital printing and the growth of e-commerce have opened the door to mass customization of printed items, including products for new consumer markets and wide-format graphic applications," says Kaufman. In addition to printing custom signage, displays and regionalized graphics, you can use digital printing to print or decorate everything from circuit boards, skateboards, walls and windows to silk scarves, smartphone cases, pizza boxes, gift wrap, swimwear and vehicle wraps.

Just as you can grow your own business by helping your customers succeed, the digital printing equipment manufacturers want to help you find ways to operate at maximum capacity. They want the analog-to-digital transformation of printing to continue, driven by the creation and expansion of new markets. In other words,

they want you to be able to earn a terrific ROI on your next purchase of digital printing equipment.

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