

**Get Smart:  
Working Hard is Hardly  
Working for Shops Looking  
to Maximize Productivity**

*A White Paper*

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**WhatTheyThink?**

## Abstract

Workflow automation has the potential to help both print providers and print buyers boost productivity and save money, and yet it is one of the most under-utilized software category today.

In a previous white paper,<sup>1</sup> I debunked the major myths and complaints about workflow automation in general, and workflow automation using Enfocus Switch in particular. In this current white paper, we are going to look at some of the primary reasons—some obvious, some not—that companies may have for integrating some degree of workflow automation. Why go through the hassle? Or is it even a hassle?

## The Ant and the Grasshopper

One of Aesop's more famous fables tells the tale of the ant and the grasshopper. As the story goes, the grasshopper spends the summer months singing and generally having a good time, while the ant works hard to amass sufficient food to get through the coming winter. When winter comes, the grasshopper starves and begs the ant for food. The ant—plainly bugged (so to speak)—chides the grasshopper for having frolicked all summer, and suggests that the grasshopper “dance all winter,” perhaps an Aesopian euphemism for something else.<sup>2</sup>

It's a very malleable story and can be adapted to suit one's particular political or economic argument. So let's recast and retell it as a fable about the graphic production workflow.

Consider two graphics professionals—let's call them Anthony and Katy<sup>3</sup>. Anthony, it seems, is always in his office, processing a seemingly endless stream of digital images: resizing them, color correcting them, converting them to CMYK, and so on. He does all of this manually and even though he's been told about how he could automate much of that grunt work (and, yes, he does often grunt while doing it), has a very strong work ethic and objects to “shortcuts.” “Besides,” he often says, “what kind of quality control can there be?” (Yes, Anthony has micromanagement issues.)

Katy is a colleague of Anthony's who works for a competing company. They would socialize more often, but Anthony scarcely has time for socializing, what with all the time he spends in the office. Katy has a similar job, with a similar number of images to process, but Katy has successfully set up a system, using Enfocus Switch, for automatically processing the images. She has written a few rules, set up a hot folder, and when images come in, they go right into the hot folder and a short while later are delivered to a processed image folder. She eyeballs them before sending them on to the next stage of the workflow, makes any manual tweaks that may need to be made (which are not many), and gets the job done in a fraction of the time it takes Anthony to do the same thing. Katy thus spends more time socializing and going to industry events. Anthony, ant-like, chides Katy for frolicking when she should be working.

Funny thing, though: Katy's company is more successful than Anthony's, and in fact Katy just got a raise. Anthony takes great umbrage at this, and has considered writing a nasty Facebook post on the subject—but has too much work to do.

The moral of the story of course is that while Anthony may be working harder, Katy is working *smarter*.<sup>4</sup>

<sup>1</sup> Richard Romano, “Welcome to the Machine: How and Why Workflow Automation Is Nothing to Fear,” sponsored by Enfocus, <http://www.enfocus.com/en/automation/resources>.

<sup>2</sup> There is also a version of the fable in which the ant is cast as the villain, stealing the fruits of other people's labor ([http://en.wikipedia.org/wiki/The\\_Ant\\_and\\_the\\_Grasshopper](http://en.wikipedia.org/wiki/The_Ant_and_the_Grasshopper)). Neither version is much favored by entomologists.

<sup>3</sup> As in “katydid,” an insect distantly related to the grasshopper.

<sup>4</sup> Actually, “more smartly” would be grammatically correct, but we would lose the “harder/smarter” cadence. And Apple started it in the 90s with their old “Think Different” ad campaign.

The time she spends “frolicking” outside the office is actually time spent getting new clients and new business, learning new industry trends, honing her design abilities, and picking up new skills. (And, okay, she does *occasionally* go dancing. You know what they say about all work and no play.)

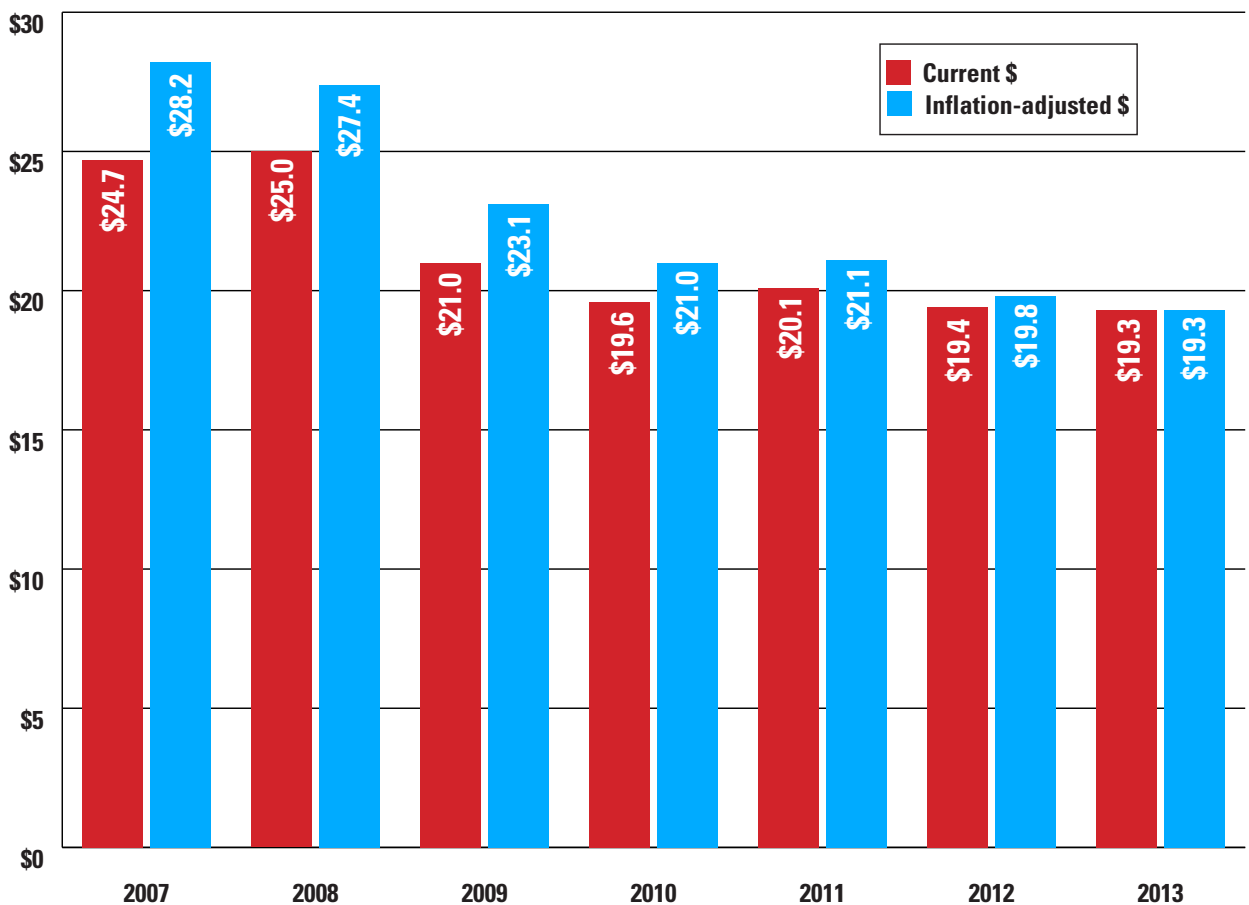
And that is really the essential driving force behind the push toward things like workflow automation: understanding the difference between “working hard” and “working smart.”

### A Question of Economics

A question you might have right off the bat is, why do we even need to work more smartly? Do we really care what a couple of fictional, anthropomorphic insects do? The reason we should care about working smart is that the business conditions of today’s graphic communications industry demand it. Companies and their employees are under pressure, whether they understand it that way or not, to attain higher levels of productivity and efficiency if they are to be competitive and therefore profitable. Let’s take a closer look at some of the economics that are exerting this pressure.

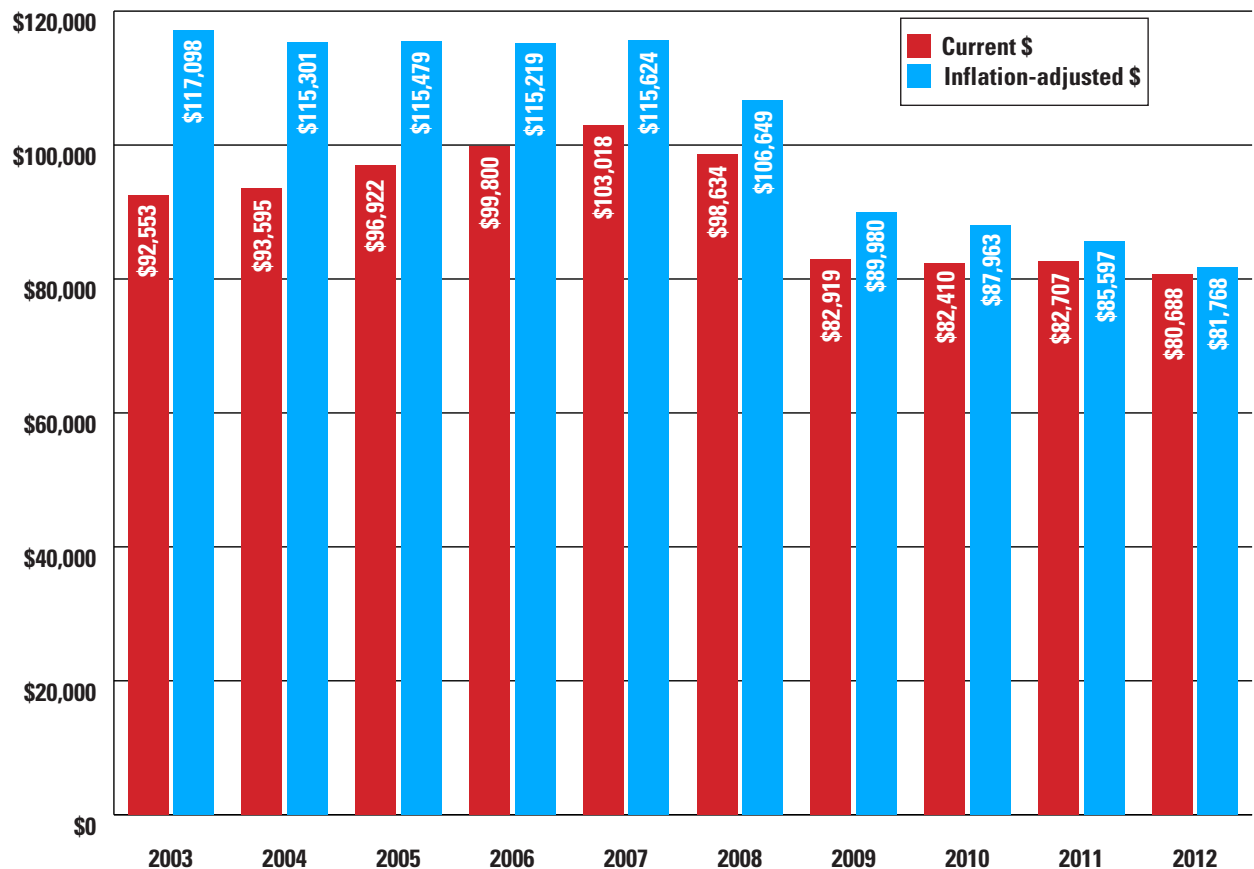
The trials and tribulations of today’s commercial printing industry are probably not a surprise to anyone. For example, the latest U.S. Government data on the value of commercial print shipments and print services continues to tell an all-too-familiar tale:

**Figure 1: U.S. Commercial Printing & Print Services Shipments, January to March, 2007 to 2013 (\$ billion)**



Source: Strategies for Management analysis of U.S. Bureau of the Census data

This is not a new trend either:

**Figure 2: Value of U.S. Commercial Printing & Print Services Shipments, 2003 to 2012 (\$ million)**

Source: *Strategies for Management analysis of U.S. Bureau of the Census data*

And the printing industry's woes have been taking place against the backdrop of an economic crisis that has been ongoing since 2008, with only modest improvement (see Figure 3 on the next page).

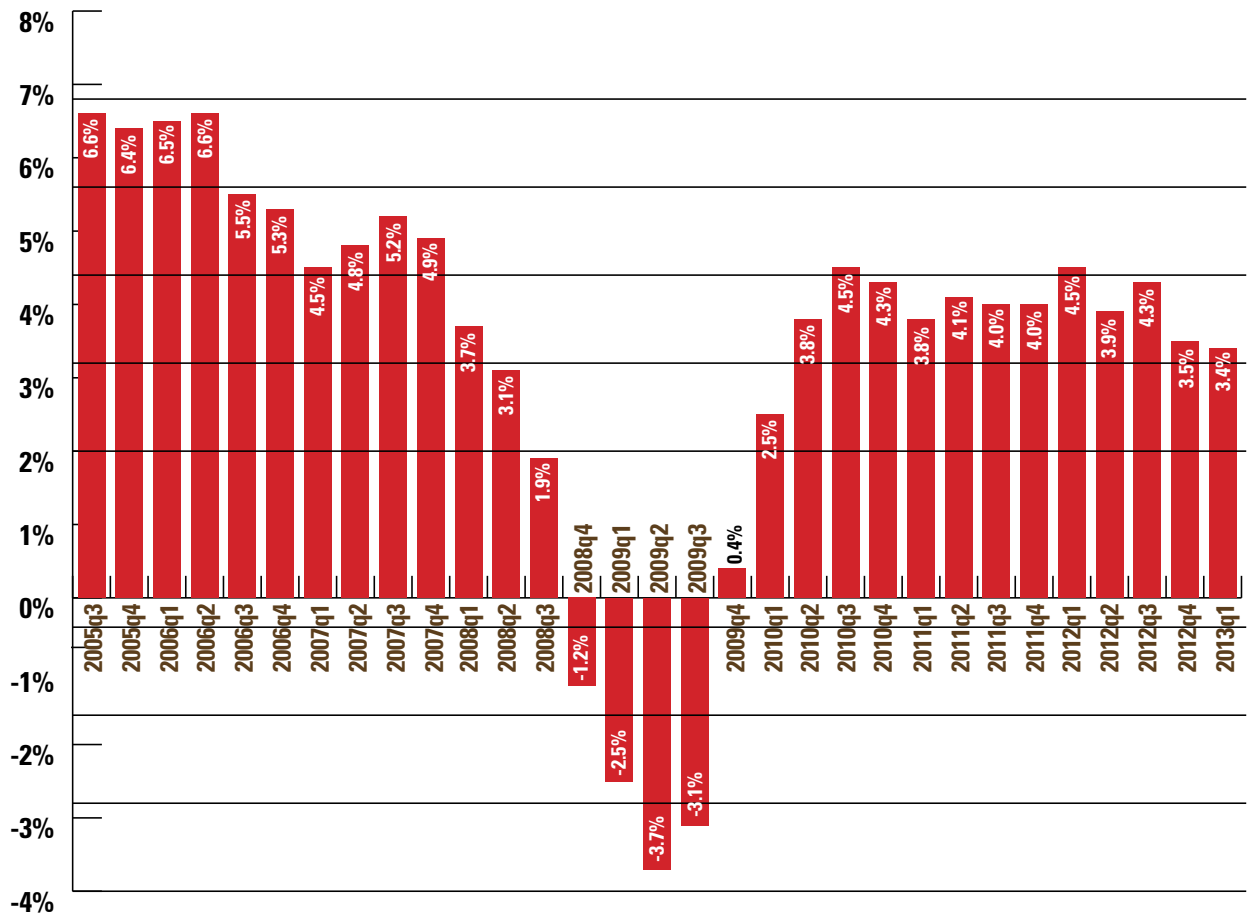
And this is just in the U.S., where unemployment has persisted in hovering around 8%. Essentially, the graphic communications (aka printing) industry has been in recession since 1998—and when magnified by a macroeconomic recession, has made a tough business all that much tougher.

However...

An important thing to keep in mind when thinking about industry conditions and the macroeconomic climate is that data are not destiny. After all, some printing companies are doing exceptionally well. And in the past, the industry has bucked the general economic trend on more than one occasion. In the late 1970s, during the period when there was a high degree of what was called "stagflation" (slow growth and high inflation), the printing industry was doing very well—a situation that continued through the dire 1981–1982 recession. A decade later, during another recession in the early 1990s, when national unemployment in the U.S. was at a (then) all-time high, employment in one portion of the graphic communication market—graphic design—was growing.

Not really. But it was a case of new technology allowing the Katys of the world to work more smartly. In the case of the printing industry in the 1970s and 1980s, the advent of electronic publishing combined with new color offset presses made it more affordable and efficient to print color, driving up demand for color printing. In the graphic design markets, the resilience to the 1991 recession was largely due to the explosive growth of desktop publishing that had started in the mid to late 1980s and had hit full tilt by the turn of the decade. Aldus PageMaker kickstarted desktop publishing in 1985; QuarkXPress was released in 1987, and Photoshop 1.0 in 1990. (Version 2.0—which handled color images—appeared in 1991.) Adobe

**Figure 3: Quarterly Change in U.S. Gross Domestic Product, 2005–2013**



Source: U.S. Bureau of Economic Analysis

Illustrator was first released in 1986 and two years later Illustrator 88 was a pivotal release. So by the time the recession hit in 1990, the “classic” applications for desktop publishing were appearing and starting to become widely adopted.

So what helped these companies succeed against such a dire background? Was it diligent ants amassing and conserving all their resources during the boom times, while the indolent grasshoppers were out of work?

Several years ago, my colleague, Dr. Joe Webb of WhatTheyThink’s Economics and Research Center, and I did some calculations to put things in perspective vis-à-vis the 1990–1991 recession. We correlated the change in real GDP, and change in several graphic design demographic categories (employees, payroll, and establishments). In 1990, real GDP grew only 1.9%, but graphic design employment grew by 2.4%, graphic design payroll grew by 5.5%, and graphic design establishments grew by 6.6%

In 1991, during which real GDP declined by -0.2%, the number of graphic design employees grew by 2.3%, graphic design payroll grew by 2.2%, and graphic design establishments grew by 7.7%. The following year, 1992, saw a downturn in employment (-6.4%) and payroll (-2.6%) but a dramatic increase in establishments (15.1%). This suggests that a fair number of designers decided to strike out on their own and form their own design firms, enabled by the new technologies. They survived the recession, and lived to design another day.

**Table 1: The 1990–1991 Desktop Publishing “Recession”**

	GDP Real	Graphic Design Employment	Graphic Design Annual Payroll	Graphic Design Establishments
1989	3.5%	-4.8%	-2.9%	-7.1%
1990	1.9%	2.4%	5.5%	6.6%
1991	-0.2%	2.3%	2.8%	7.7%
1992	3.3%	-6.4%	-2.6%	15.1%
1993	2.7%	5.1%	7.1%	10%
1994	4%	1.9%	9.4%	1%
1995	2.5%	11.2%	14.6%	4.3%
1996	3.7%	6.3%	14.2%	8.3%
1997	4.5%	3.3%	9.1%	5.6%

Source: U.S. Bureau of the Census

Individual industries and markets have their own dynamics that can offset prevailing macroeconomic trends.<sup>5</sup>

But, the moral of this story is that if there are compelling market drivers in an industry, such as new tools and technologies appearing and stimulating investment and the creation of new businesses and freelancers, those industries can remain somewhat immune to drastic economic downturns, at least surviving if not thriving.

So, the \$64,000 question is: are we in such a position today? Are there tools and technologies that can help print service providers, graphic designers, and others in the various graphic communications markets counter the prevailing economic trends?

Yes. Obviously, new and emerging media—such as mobile—are hot areas of development, but any tools that streamline an operation, that make it more productive and efficient, can help companies keep themselves ahead of the curve. The production software of the 1980s and 90s juiced up the graphic arts not because it invented new types of media, but because it made graphic arts workflows more efficient, more productive, and more cost-effective. Think about laying out pages by hand (physically cutting and sticking typeset copy onto pasteboards) vs. electronically (in PageMaker, QuarkXPress, or, today, InDesign). Think about color-separating images photographically vs. selecting a single command in Photoshop. Look through just about any menu in Photoshop, InDesign, or Illustrator—or even Microsoft Word—and you’ll find that most, if not all, of the commands reflect something that at one time used to be done by hand.<sup>6</sup> How much time and money have these software programs saved graphics professionals?<sup>7</sup> How much more efficient have they made graphic arts businesses? How much did they enable the creation of new businesses?

So software in general automated what had once been laborious processes. And while we need to be careful about ascribing *too* much impact of those programs on macroeconomic conditions,<sup>8</sup> the truth is, they did help “recession-proof” to some extent certain market segments. Today’s automation software—like Enfocus Switch—simply takes these things to the next level, and while we are not going to proclaim

<sup>5</sup> An alternate, negative example of this is also offered by the printing industry, which went into a recession of its own in 1998—at the same time the economy in general was in the midst of the tech boom. Again, all markets and industries have their own dynamics.

<sup>6</sup> A great example is the Photoshop command Unsharp Mask, a filter that makes images less blurry. Back before digital imaging, prepress professionals used a physical mask—called an “unsharp mask”—to photographically sharpen images. And, in fact, the two most popular commands in all of computerdom—Cut and Paste—refer to when text or graphics used to be physically cut and pasted.

<sup>7</sup> Some of us are old enough to have owned typewriters back in the day before computers. Term papers, essays, and of course the awful novels we wrote as teenagers, if they had to be revised even slightly, needed to be completely retyped.

<sup>8</sup> And, well, let’s face it, they did make it tough for other businesses, like color separation houses. But the software did allow those businesses to easily transform themselves into other businesses.

that it will “recession-proof” any given market segment, or company within a segment, it can go a long way toward helping keep a company alive.

## Keep Yourself Alive

It is not out of line to say that many in the commercial printing industry today are in “survival mode.” As we saw earlier, they have been in survival mode for a long time, since around 1999. The printing industry’s woes became acute following the bursting of the tech bubble in 2000–2001, and never really improved. The severe 2008 worldwide economic collapse simply exacerbated problems wrought by changes in the demand for print, such as competition from electronic media.

There are other issues that threaten this survival mode, too.

Even in those areas where demand for print remains strong—direct mail, for example—the advent of digital printing almost two decades ago has helped drive down the average run length of commercial print jobs. Not that run lengths *per se* were getting shorter, but marketers and other print buyers were putting a greater premium on targeted marketing, carefully selecting who gets a particular printed piece. Although true variable-data printing has yet to live up to its promise, marketers are using databases to carefully select who they print and mail to. And they have seen better response rates, higher sales, and better return on investment.

However, that better “ROI” for the marketer hasn’t always trickled down to the print provider. Once, a long 25,000+-impression offset run could be a fairly profitable project, and while profit margins were never lavish, they were often satisfactory. Today, though, aggregating a bunch of smaller, 100–500-impression (or less) digital runs has been a substantial challenge. The orders bring in much less money per job, meaning slimmer margins and the need to get as many of those small jobs as possible. And this is where the need for efficiency and automation enters the picture. In order for all those small jobs to add up to meaningful profit, they need to get on and get off press as quickly and efficiently as possible. There is little time for bottlenecks, or even for our old friend Anthony to spend a day and a half processing images.

It isn’t just declining run lengths and lower profit margins. Dealing with problematic files has been one of the perennial problems of digital prepress since virtually day one—and even after almost 30 years of desktop publishing, contending with “bad files” from customers has shown almost no sign of abating—and there is anecdotal evidence to suggest that it may be getting worse. Here are some reasons why:

- More and more designers raised on Web design have been venturing into print, and these are the folks who don’t know their RGB from their CMYK. Or worse: they don’t know that you can’t grab a 5KB GIF from a Web site and expect it to reproduce in print at 5x7 inches.
- Digital printing technology has its own needs and production demands, be it toner or inkjet, and page elements such as fine type, gradients, and color, will reproduce differently on a digital press than an offset press. So a file that may have been formatted perfectly for an offset workflow may not reproduce well on a digital press, and vice versa.
- Speaking of inkjet, accurate color management and profiling is becoming imperative in the world of high-speed production inkjet printing, as using the wrong color profile can result in too much ink being laid down. With inkjet, too much of a very watery ink can cause the paper to cockle, leading to poor quality printing. Thus, files need to be set up with even more rigorous demands than in previous print production workflows.
- Other types of printers—like newspaper printers—moving into general commercial work, and using newspaper presses (also known as nonheatset or coldset web presses). Newspaper presses have their own issues when they are used for high-quality color commercial work, such as problems with registration.<sup>9</sup>

<sup>9</sup> I recently worked on a design project that was being printed by a newspaper printer in Gloversville, N.Y., and as a result all the images had to have the rich blacks replaced with true blacks in order to avoid any misregistration issues. “We use a program called PitStop Pro from Enfocus,” the production manager told me. “Have you heard of it?” It rings a bell...

So processing files efficiently and fixing errors immediately have become key elements of keeping graphic arts companies alive. And it's not just print providers. Graphic designers and content creators are pulled in many different directions by the expanding media mix. The need to format images and documents for all the places they need to go—print, Web, mobile, perhaps even wide-format printing, or even more—also increases the need to process those files as quickly as possible. Anthony and Katy are both probably working on online versions of the publications for which they are preparing all those images. And since the Web, print, and any other media channel each has its own unique technical requirements, that means our weary designers have essentially double the workload. Add in mobile media and the workload could easily triple. So Anthony is *really* working hard, and probably being smug about it. But Katy continues to be smart, and has automated as much of the extra workload as she can, letting her focus most of her energies on coping with life and work après survival.

Life after survival...what does that look like?

## Après Moi, Le Déluge...Of New Business

The moral of our little *faux* Aesopian fable about Anthony and Katy was that Anthony was working harder, but not having an awful lot to show for all his hard work, least of all time to go out with Katy, and that Katy, thanks to a reliance on workflow automation, has the ability to pursue new clients, new business opportunities, and develop new skills.

### The Freedom to Create

One of the primary advantages to workflow automation in general, and via Enfocus Switch in particular, is that it allows companies and individuals to free up their time to focus on creativity. And by "creativity," I mean a couple of things.

If you're a content creator, your primary stock in trade is, naturally, your creativity, your design savvy. But a print provider is—or should be—no less creative, but in different ways. Businesspeople and aspiring entrepreneurs are often told to "find hidden opportunities," but that implies that they're doing little more than going on a scavenger hunt, looking for opportunities that have been hidden by someone, rather than by looking at the market creatively and spotting the opportunities no one else sees. Print business owners and managers—and graphic communications professionals in general—need to think like an artist, like a sculptor. The great artists like Michelangelo weren't looking under rocks for hidden statues. Instead, they looked *at* rocks and "saw" the statue trapped inside. After that it simply became a mechanical task of carving away the rock to "let it out." Part of that "mechanical task" is freeing up time in the workflow. You have more time to devote to creative business strategizing, and envisioning those new opportunities, when you are not bogged down in production snafus. Sure, a printing company's executive management—those doing the creative strategizing—is probably not fixing files, but anything that frees up production resources to then pursue these new opportunities gives a company an advantage.

Automating repetitive tasks can provide the oxygen required to fuel the spark of creativity.

## Old Dogs and New Tricks

It's become a cliché to say that things change rapidly, but think about how much graphic design and production tools have changed in just the past five years. And it's more than just knowing what version the Creative Suite is up to. Think about how media channels in general have changed. At the same time, design trends change almost as rapidly as fashion trends.<sup>10</sup> How many of us are on top of the latest versions and capabilities of our software tools? Do we know what the latest best practices are? How many of us inadvertently design in a "retro" style, because our skills are stuck in the past?

Working hard in the "Anthony" sense that we have been talking about in this white paper keeps us from

<sup>10</sup> Were you even aware that every year Pantone identifies a "color of the year"? For 2013, it is "emerald." <http://www.pantone.com/pages/index.aspx?pg=21055>.



being able to develop new skills, to learn new software, to take a close look at what the latest trends are and how to adapt one's techniques and one's business. Automating as much of the workflow as possible can free you to, as *National Geographic* puts it, "explore your world." Getting out from behind the computer every once in a while is a vital part of staying creative—in all the senses of the term.

Here are some other "creative business" issues we don't always—but should—have time for:

- creating/offering new services
- improving customer service
- improving marketing and promotion efforts
- enhancing and improving the workflow
- innovating

The Centrostampa Digitalprint Case Study on this page provides an example of how this works "in the wild."

## At the End of the Day

Whether you are an independent freelance designer or a large multi-facility printing plant—or anyone in between—today's business conditions place an emphasis on working smart, and a large part of that "working smart" is streamlining and automating as much of the workflow as possible. As I pointed out in the previous white paper, automation doesn't mean that you are surrendering any quality control, or that the software will run amok, creating a doomsday scenario à la Eric Drexler's "gray goo"<sup>11</sup> or even do something more prosaic like make human workers redundant.

It also doesn't mean that *everything* can be automated. We can define the parameters of what it is we are automating, and only automate those things that make sense to automate. Again, look at any menu of commands in your graphic software and think about whether you would be better off if you did those things by hand. After all, "automation" has been with us since the beginning. What was Mergenthaler's Linotype but a way of automating typesetting? Or phototypesetting? Or desktop publishing? Should we go back to composing pages using individual metal letters? Even the printing press itself was a kind of automation; do we want to hand-copy manuscripts?

Workflow automation has been the goal since the workflow was invented. It saves us time, it saves us money, it improves quality, and it gives us the flexibility to concentrate our efforts on those parts of our business that can't be automated: the creative and strategic aspects. We can think at length about how we differentiate

ourselves from the competition in an environment where anyone can design a page,<sup>12</sup> anyone can buy a digital press and provide output "out of the box." But there is more to graphic design than picking a font

<sup>11</sup> Eric Drexler is a pioneer in the field of nanotechnology who proposed, in his seminal 1986 book *Engines of Creation*, a hypothetical end-of-the-world scenario in which self-replicating "nanobots" consume all matter on Earth, turning everything into a "gray goo."

<sup>12</sup> As print providers will readily admit—often with a sigh—Microsoft Word is being used more and more as a graphic design program, even if it is not the best tool for that purpose.

## Centro Stampa Digitalprint's Automated Gatekeeper

Centro Stampa Digitalprint is a 20+-year-old printing company based in Rimini, Italy, specializing in catalogs, technical manuals, commercial, and transactional printing. They have a combination of digital and offset equipment, and launched their Web-to-print capabilities in 2008.



They implemented an Enfocus Switch-based workflow and, to focus on just one piece of the puzzle, Enfocus Switch has

simplified order entry and management for both customer and printer. The customer places the order online and uploads his/her files, at which point the job ticket and files become a unique package that enters the Switch flow, managed via the metadata attached to the job. The package includes all the information required by prepress, as well as logistical information like shipping address and delivery date. The metadata fields and the content therein are used to automatically make routing decisions, to set the parameters in automatic operations, and more. Centrostampa Digitalprint also uses the SwitchClient Module, a desktop application used to submit jobs into the Switch workflow and interact with jobs as required. It's essentially a checkpoint, allowing the operator to verify the accuracy of the order and intervene if necessary.

Caio Guardigli, prepress director, says, "Our new Switch-based workflow manages the entire production cycle, enabling us to reduce errors and standardize procedures. The result is a reduction in the cost and time needed to produce work, fewer errors, and happier customers."

And a happy customer is a paying customer.

and adding a color, and there is more to being a printer than hitting the “Print” button. To survive in any of these businesses requires a great deal of creative and strategic thinking and not simply a series of rote, repetitive tasks.

At the end of the day, it’s not enough to work hard. The key is to work smart. And that will make all the difference. Just ask Anthony and Katy.



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This white paper was sponsored by Enfocus. For more information about Enfocus' Switch product family please visit [www.enfocus.com/en/products/switch](http://www.enfocus.com/en/products/switch).

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