What Print CEO’s Need to Know about Automation  
Part One of a Two-part Discussion on ROI and Usage  
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It isn’t sexy, nor is it easy, but it’s very profitable. There’s new data on it that took years to collect, but proved to be well worth the effort, considering the discovery of some rather startling ROI data. The subject is print automation, or more specifically JDF-enabled print automation. The term “JDF” gets less press today than it did a few years ago. Some editors found it too technical or that some printers dismissed it as a topic only for vendors and programmers. “Automation” has become a code word for JDF-enabled automation. “MIS” another is another code word, as JDF-enabled print MIS often serves as the hub and director of JDF-enabled workflow systems. Unfortunately, this means that a significant portion of the print market has been subtly left in the dark; it’s almost as if JDF-enabled automation has become a secret, only whispered among those in the know.

But that secret is spreading. Okay, you ask, “Who is using JDF?” The answer isn’t so easy to find. From 2004 to 2008, CIP4 conducted annual surveys of its vendor members, asking two questions: how many installations of JDF-enabled systems do you have, and how many sales or pending installations do you plan to install in the next three months? We came to realize that the results were meaningless. Since JDF is now supported by the most common applications, such as Adobe Creative Suite/Acrobat and Quark Xpress, as well as by all the major RIPs, virtually every printer in the world has JDF capabilities, but that is not the same thing as automating. Automation is not something you just buy: automation requires planning, coordination with vendors and project management, and a vision. Automation is done by printers with intent.

The only way to measure the proliferation of JDF-enabled automation is to ask printers directly. This year Printing Industries of America collaborated with CIP4 to embed some questions about automation and JDF usage in it Ratios survey. (For more information on the Ratios, visit www.printing.org/ratios.) We learned that …

- 28.8% of printers have implemented automation and use it in day-to-day operations.
- Another 14.1% are in some stage of implementation.
- 22.1% plan on implementing automation or extending their automation programs this year.
- Another 23.9% plan on implementing automation or extending their automation programs in the next two years.

We know that almost all printers implement automation in stages, often starting by connecting a few devices or a couple of departments, and then expanding from there. One of the primary benefits of using JDF-enabled systems is that it defines the language of integration for all devices. This means you can implement automation in stages, and have confidence that as you expand your automation, you don’t have to re-engineer and re-integrate equipment that is already automated. One interesting disclosure is that the priority for automation seems to be front-end operations. The top five areas of automation were …

1. 21.4% — Customer interface/web portal/web-to-print
2. 20.2% — Job planning/job scheduling
3. 19.7% — Management reporting
4. 19.1% — Estimating
5. 18.5% — MIS-to-prepress

These are followed by pressroom and customer reporting. However, notice that there is no area that has a clear majority … each printer has their own priorities for where to start, and there is no standard or consensus on what to automate first. Each printer needs to determine for themselves where there are bottlenecks in production, redundant labor, high levels of error, old equipment due for replacement and other factors that contribute to the decision on where to start.

Those who specifically knew that their systems were using JDF for exchange between systems reported that integration was between two or more devices in a department (25%), or connected between two or more
departments within a plant (53%). Unfortunately, only 6.3% reported that they had automated all operations from customer to delivery, and only 12.5% reported extending automation to their customer. As you’ll see in the second part of this article, there are huge productivity gains to be had in those two areas.

What about the 31.2% of printers who are not planning to implement automation; what is their reason? Fifty-one percent said that they lack knowledge of process automation or lack staff training and expertise. However, training is widely available. Some great resources include:

- The JDF Expert Certificate Program — A thirteen-part streaming media course that is designed for non-programmers who want to learn how JDF works. This program is recommended for anyone who will lead their company’s implementation program, and is available from IDEAlliance + IPA at http://www.idealliance.org/certifications/jdf-expert.
- JDF Workflow by Thomas Hoffman-Wallbeck and Sebastian Riegel — A book that explains the concepts of automated workflows and how JDF is used in integrations. It is written in a way that is clear and not over-technical, and is soon to be released from Printing Industries of America.
- The Automated Solutions Network (ASN) — A user group of printers who have implemented automation. Benefits include an email forum and semi-annual meetings which feature discussions, presentations by experts and tours of printing plants. See http://www.printing.org/automation.
- Best Practices for Print Automation from the ASN by James Harvey — A short book on the collected lessons learned, tips and advice from printers who have automated operations, for printers who want to automate. This publication is written for managers, and is available from Printing Industries of America at http://www.printing.org/node/9537.
- CIP4 Resources — The CIP4 website includes case studies, the JDF Marketplace (a directory of JDF-enabled products and services), free tutorials and much more. Visit http://www.cip4.org.
- Training Programs and Seminars — There are usually several seminars held in North America each year on the subject of print automation, often at universities. CIP4 also occasionally offers free one-day seminars lead by industry experts in conjunction with its meetings. Periodically check the CIP4 website for listings on its events schedule.

So training resources are available, and you don’t have to look far to find them. The lack of knowledge and training isn’t likely to be due to a lack of resources, but rather a lack of interest by top management. We’ve learned from ASN that the single most important factor in a successful automation implementation is C-level buy-in. The printers who have begun to automate, or those who have achieved full automation are most likely the print companies whose CEO has inspiration and vision for what they wanted their automated operations to look like. In fact, the top reason why 31% of printers are not planning on implementing automation is that those printers are either not aware of its benefits (28.3%), or believe that it is too costly (37.7%).

The bottom line is that those printers are not aware of the ROI for JDF-enabled automation. “What is the ROI on JDF?” sounds like a simple question, but unfortunately there is no simple answer. Printers who have implemented JDF-enabled automation have different goals, strategies for operational efficiencies, niche markets and services that they want to address, and so forth. So the ROI from a single case study cannot be generalized for all printers. However, since 2005 CIP4 has gathered over 70 very detailed JDF-enabled automation case studies through the CIP4 International Print Production Innovation (CIPPI) Awards Program. Providing ROI data is not a requirement for the awards program, but there is ROI data available in 41 case studies from 39 different printing companies. (Three companies used phased implementation strategies and submitted more than one application for the CIPPI awards program over the years.)

By analyzing these detailed case studies, we can finally arrive at an answer to the question, “What is the ROI on JDF?” (To be continued in Part TWO.)