A Roadmap to Evolving Your Business

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About the Author

INTEGRAL METRIX GROUP

Integral Metrix Group (IMG) is a Business Development Company in the graphics communication industry providing services from business planning and development through marketing and workflow integration. Our focus is to work with customers on the evolution of their business by streamlining their operations to drive operational efficiencies and increased productivity which will yield higher revenues and profitability.

Dave Zamorski, President of IMG and his team, have extensive experiences in the Graphic Arts industry from various disciplines, which allows IMG to have a unique and relevant perspective that they have shared in this book. Dave is on the Board of Advisors of the Delaware Manufacturing Extension Partnership which works with manufacturers to implement Lean Methodology, ISO, 5S, etc. He is a member of The Association for Operations Management and on the Steering Committee of the Automation Solutions Network (formerly the JDF Users Group) representing digital printing. Dave speaks internationally on automated workflows, business development, Lean Manufacturing and the transition of PSPs to MSPs.

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A Roadmap to Evolving Your Business

There have been numerous articles and white papers written about how manufacturers of printed materials must transition their businesses to better meet the needs of today's market realities. Many tout the benefits of transitioning from a print service provider to a marketing services provider, but few offer details about exactly how to achieve this transition profitably.

Getting Your House in Order

The need to adapt your business to meet the demands of today's tech savvy clients is apparent. However, the cost of making this or any other major transition is considerable and not without its risks and tribulations. Businesses that have made the transition have found that the rewards are well worth the effort. These newly restructured businesses are growing in a contracting market—often at double-digit growth rates.

This book offers a roadmap to evolving your business. It outlines the specific steps required to transition to a new business and operating model that is better aligned with the requirements of today's marketplace and that has the flexibility to continue to evolve—profitably—into the future. It does not delve into the specific markets your business should pursue, since that will vary from business to business. But it will take you through the steps to "get your house" in order. It will provide you with the necessary action steps that will better position you to increase profitability and to more easily finance your transition with existing capital you may not even realize you have in your company. The roadmap laid out in this book applies to all businesses. Taking this path is essential in order to successfully restructure current capabilities or add new capabilities to your company.

Regardless of which sales and marketing direction you decide to take your business, the roadmap offered here will apply, even if you decide to stay in the core business of print manufacturing rather than expanding into marketing or other services. Throughout the book, we will use the term print manufacturer to describe these evolving businesses. That is what a print service provider is—a manufacturer of a product. As we will discuss, it is a fallacy to consider every job that comes through your plant as a different, individual job with no relationship to other work you are producing. Whether a customer project is a static document such as a brochure produced in varying quantities, or a highly sophisticated, integrated campaign that includes social media, personalized URLs, SMS messaging and print, these are all products and there are similarities within each product category that will allow you to build significant manufacturing efficiencies that will improve both productivity and profitability for your firm.

Getting your house in order means ensuring that you have the most cost effective operation in place in order to deliver superior pricing, products and services to your clients. This enables your clients to ensure that their costs, at least as related to the services you deliver, are in line with their ability to maintain and grow their own profitability. Getting your house in order also means a more streamlined operation that can quickly address current and emerging customer needs. This helps ensure a base of long-term, very satisfied customers as well as the ability to add new customers and new applications for continued growth.

To stay in business and to prosper in today's dynamic and highly competitive marketplace, print manufacturers must adapt, but they must also ensure that their core business is productive and profitable prior to expanding into new products, services and target markets. This roadmap will delineate the necessary steps to bring the current business into focus and position your firm for future expansion and growth.

Let's first take a look at the condition of the commercial printing industry as a whole, and then narrow our discussion to the steps you can take to raise your performance well above industry averages.

The roadmap provided here will give you specific and detailed actions you can take to achieve these objectives, including:

- Taking control of operations
- Defining your strategy
- Streamlining workflow
- Value Stream Mapping
- Choosing a workflow solution

The Cold Hard Facts

The Printing Industry Will Continue to Contract

There are various data sources that project the future state of the commercial printing industry. For purposes of this book, we are citing a recent forecast prepared by Dr. Joe Webb, Director of WhatTheyThink's Economics and Research Center. While the numbers presented here are not encouraging, individual businesses have the opportunity to buck the trend and build a successful future by following a roadmap for success presented in this book. Businesses that continue to operate in a "business as usual" manner are more likely to be a victim of the forces of change impacting the industry.

In Figure 1, Dr. Webb paints a somewhat dire picture of the continuing downward trend in printing shipments for the U.S. commercial printing market, showing a 35% decline from 2011 to 2017. Printing shipments, which ended 2011 at $85 billion, are expected to weigh in at $55 billion at the end of the forecast period. While other sources may not be predicting as dramatic a decline, none are projecting a return to the levels of growth the industry has seen in the past. Dr. Webb's forecast addresses the U.S. market, but industry experts also report similar conditions for Canada and Western Europe. In many developing countries, print is still growing; however, it will only be a matter of time before these markets will begin to see a decline as well.

Figure 1. A View of the Commercial Print Industry: 2011 – 2017

	Forecasts by Statistical Model			WTT ERC Qualitative Forecast
	Conservative	**Aggressive**	**GDP (+2.5%)**	
2010	$87.2	$87.2	$101.6	**$85.0**
2011	$85.7	$79.0	$99.1	**$81.0**
2012	$82.7	$72.0	$96.5	**$76.0**
2013	$79.9	$64.5	$93.9	**$72.0**
2014	$77.2	$56.5	$91.2	**$67.0**
2015	$74.5	$48.1	$88.4	**$62.0**
2016	$72.0	$39.3	$85.6	**$55.0**

Source: WhatTheyThink Economics & Research Center

The Cold Hard Facts

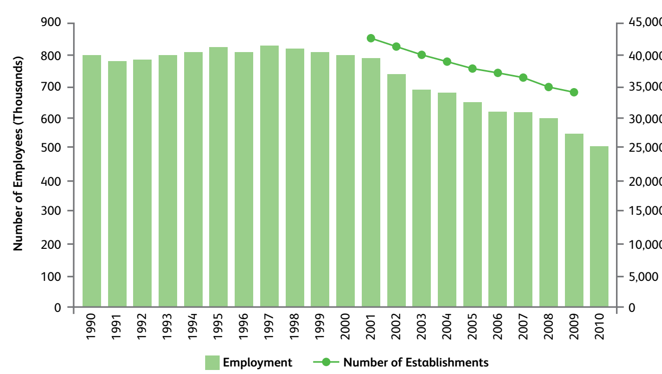
The Number of Print Establishments Will Continue to Decline

The consolidation in North America and Western Europe is being driven by a weak economy, but has accelerated due to the shift in spending by marketers from traditional to digital marketing channels. As a result, there has been an unprecedented decline in the number of print establishments over the last 10 years. Printers are filing for bankruptcy, merging with other businesses or getting acquired, or simply closing their doors as reflected in Figure 2's U.S. data. Will you be one of them? The steps in our roadmap will help ensure that you are not counted in these unfortunate statistics.

At the same time, there has been explosive growth in digital and online technologies that have changed the way consumers communicate and receive information. The Internet, growth of mobile applications and social networking have forever changed the communications platform as we know it. In a presentation at the Direct Marketing Association's Annual Conference, Bruce Biegel, Managing Partner of the Winterberry Group, shared startling data that reflects the rapid growth of these new digital alternatives to print (Figure 3 on the following page). This explosion in the use of digital alternatives to print is certainly not limited to the United States; rather, it is a global phenomenon.

This growing dependence on digital alternatives is not restricted to the younger generation, either. All age groups are evolving to an online world with instant access to

Figure 2. U.S. Commercial Print Market in Systemic Decline—U.S. Printing and Related Support Industry (NAICS 323): Employment and Number of Establishments, 1990 – 2010



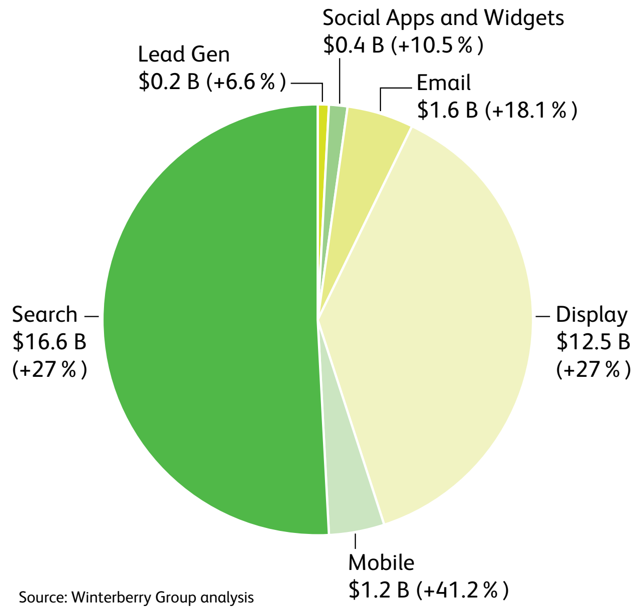
Source: Bureau of Labor Statistics

information and real time communication. Marketers must work to understand how target markets wish to receive communications at any given point in time so they can connect with them at exactly the right moment. Search giant Google calls this decision-making moment the Zero Moment of Truth.

If you are thinking that this is a flash in the pan, it is not. There is no going back to business as usual. As marketers continue to invest in mobile, social media and other digital channels, the decline of traditional print will continue. An important attraction of online channels for marketers is the ability to track and report in near real time, helping them ensure that their campaigns deliver the ROI they are expecting. This is spawning even more investment in reporting and analytics, with marketing platforms and tools that enable accurate measurement and tracking of marketing spend. This is exactly why personalized and targeted cross-media communications will become the norm. Print will play a role, but its role will be different than in the past. Increasingly, print is being used to drive consumers to various online channels to enable marketers to engage in an ongoing dialog. This allows them to build loyalty, gather more information about consumers that will help them refine future communications and position them to be in the right channel at the right time at the Zero Moment of Truth.

For print manufacturers, especially those who can offer cross-media services, this should be good news. For one thing, a cross-media campaign that is designed, priced and executed properly should deliver higher margins than print alone. Secondly, this level of engagement with clients places the print manufacturer further up the value chain in the marketing process, and increases the manufacturer's overall value to the marketing client. It is not a commodity offering, and these types of services typically evolve into recurring, programmatic engagements that lock in the client and reduce the overall cost of sales for the print manufacturer.

Figure 3. 2011E U.S. Digital Advertising Spending, $32.6 B



Source: Winterberry Group analysis

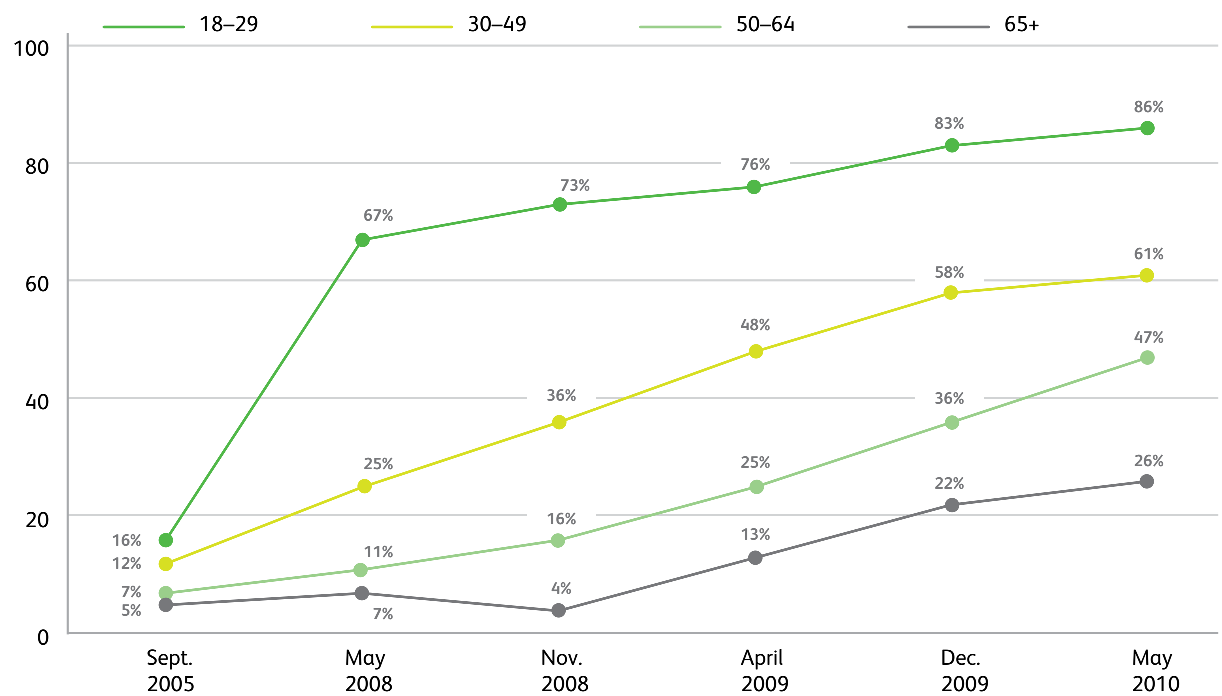
…ensuring that you have an efficient, cost-effective and highly productive operation, not only will you be able to keep your pricing in line with market expectations, but you may be surprised at the level of cash flow you can liberate to fund necessary investments.

The Cold Hard Facts

Keep in mind, though, that higher margins do not necessarily mean higher prices. And entering into the cross-media realm, or expanding your presence, requires investments in people, process and technology. Given the structural change both the printing industry and business communications in general are undergoing, these facts reinforce even more the importance of putting your house in order. By ensuring that you have an efficient, cost-effective and highly productive operation, not only will you be able to keep your pricing in line with market expectations, but you may be surprised at the level of cash flow you can liberate to fund necessary investments.

The remainder of this book provides you with critical information that will better prepare you and your company for the business transformation necessary to not only survive in a turbulent environment, but to flourish as well. It offers viable suggestions for businesses small and large, and lays out the core elements necessary to build a business that effectively addresses and capitalizes upon today's market realities.

Figure 4. Social Networking Use Continues to Grow Among Older Users



Source: Pew Research Center's Internet and American Life Project Surveys, September 2005 – May 2010. All surveys are of adults 18 and older.

Figure 5. Technology that CMOs Worldwide Plan to Increase Their Use Of in the Next 3–5 Years, June 2011

Percentage of respondents

Social media	82%
Customer analytics	81%
CRM	81%
Mobile applications	80%
Content management	73%
Tablet applications	72%
Single view of customer	70%
Collaboration tools	68%
Predictive analytics	66%
Reputation management	63%
Search engine optimization	62%
Campaign management	61%
Score cards/dashboards	56%
Email marketing	46%

Source: IBM,'From Stretched to Strengthened: Insights from the Global Chief Marketing Officer Study,' October 11, 2011

Taking Control of Your Operations

For most companies, payroll is one of the largest—if not the largest—expenses. Payroll typically consumes 35% to 40% of operating costs. And these costs will only continue to increase on a per capita basis. For many print manufacturers, the cost of payroll is a significant barrier to the investments required to make the transition to marketing services provider.

An NAPL study conducted in 2009 confirmed that the bottom 25% of small to medium-sized printers experienced a 6% rise in labor costs and a 5% loss in profits over a two year period. However, as Figure 6 reflects, averages don't tell the entire story. While payroll costs on average, and for laggards, are on the rise, leaders (the top 25% of firms) have seen a decline in those costs.

The target for print manufacturers should be to reduce payroll to a manageable 20% to 22%. This is achievable if the manufacturer is willing to make the necessary changes. This is not an easy task, but one that is more than worth the effort. Even small changes can have a huge impact on the bottom line.

So where does one begin to improve profitability in order to free up cash to invest in needed technology? The answer might surprise you.

Figure 6. NAPL Cost Study for Print Manufacturers

2009	Leaders Top 25%	Average 287 Firms	Laggards Bottom 25%
US$ Revenues	1,016,447	1,016,939	906,100
Sales	100	100	100%
COG	27.5	29.5	30.6%
Payrolls	25.5	32.9	40.4%
Overhead Expense	21.9	26.9	30.8%
Profit	25.2	10.7	-1.8%

2007	Leaders Top 25%	Average 287 Firms	Laggards Bottom 25%
US$ Revenues	1,194,351	1,181,915	1,338,012
Sales	100	100	100%
COG	26.8	29.1	31.5%
Payrolls	26.9	31.4	34.4%
Overhead Expense	23.3	27.0	30.7%
Profit	23.0	12.6	3.3%

Finding Hidden Capital and Profits

Historically, print manufacturers have pushed for higher sales as the primary means of increasing profits. Great sums might be spent on advertising or on marginal product differentiation, and the sales force was whipped into action to capitalize on them. But assuming a 10% pretax profit margin, for every single dollar spent with a goal of increasing profit, the sales team had to sell an additional $11 worth of printed materials, as demonstrated in the simplistic P&L example in Figure 7.

Note: This is a very simplistic example. The impact on the bottom line of a reduction in cost or an increase in sales could be smaller or greater depending on the exact nature of the individual printer's expense structure. Key elements such as economies of scale and fixed, variable and incremental costs will vary.

On the other hand, the bulk of every dollar removed from the cost structure drops directly to the bottom line as pretax profit. In this very simplified example, a 10% reduction in expense provides a 9% increase in pre-tax profits. A 10% increase in revenues, on the other hand, provides a 1% increase in pre-tax profits. Thus, a better and faster way to improve profits is to reduce expenses through cost reductions.

By following the roadmap outlined in this book, you will benefit from increased capacity, cash flow and profits that will help you become a next generation print manufacturer and succeed well into the future. The ability to handle hundreds of orders, small and large, per day without human intervention is achievable today. Your digital presses can literally start up on their own to process and print orders while no one is in the shop. From books to brochures to direct mail, touchless printing is here today.

Figure 7. Impact of Cost

	Base Case		Reduce Expense 10%		Increase Revenue 10%	
Gross Revenue	$1,000	100%	$1,000	100%	$1,100	100%
Cost of Goods Sold	$750	75%	$660	66%	$825	75%
Gross Margin	$250	25%	$340	34%	$275	25%
Sales, General and Admin Expenses	$150		$150		$150	
Total Expenses	$900	90%	$810	81%	$975	89%
Operating Margin	$100	10%	$190	19%	$125	11%
Pre-tax Profit (no interest expense)	**$100**	**10%**	**$190**	**19%**	**$125**	**11%**
Taxes	$50		$95		$63	
Profit after Tax	**$50**	**5%**	**$95**	**10%**	**$63**	**6%**

Source: Integral Metrix Group (IMG)

Your road to profitability is right around the corner. Create the plan and get your house in order. Begin a new future today.

With that as a backdrop, let's move on to the critical steps required to position your business for the future.

Taking Control of Your Operations

Step One: Define Your Strategy

Defining what you want your company to be is the first critical step in getting your house in order. This step will help you identify and define the resources and staff you need to put in place, the type of workflow and software solutions required to implement, the applications and services you will provide, the markets you will target, and ultimately, your business financials.

Key considerations for defining what you want to be include:

- How do you want your company to be positioned in the marketplace?
- What do you want to be known as? A marketing company? A marketing services provider? A print manufacturer?
- What are your current areas of expertise, core offerings and points of differentiation, and where you would like to be in one, three or five years?
- Are there key market segments you should focus on based on your core capabilities and expertise? How can you leverage those capabilities and that expertise into other markets?

Step Two: Develop a Formal Business Plan

Once you have answered these questions, the next step is to develop a formal, executable business plan with defined goals and business objectives. Even though most people understand the importance of having a formal business plan that establishes clear strategy and direction, very few take the time to actually put pen to paper. In these times, it is more important than ever before to invest the time in articulating who you are today and where you want to be in the future. Be sure to engage your senior team, across the various disciplines, in the business planning process. Each team member will be able to provide valuable insights during this process.

Even though most people understand the importance of having a formal business plan that establishes clear strategy and direction, very few take the time to actually put pen to paper. In these times, it is more important than ever before to invest the time in articulating who you are today and where you want to be in the future.

The core components of a viable business plan include:

- Business Objectives: There should be three to four specific, measurable goals (such as objectives for total billings, personnel costs).
- Keys to success: These are the defined points that will be the difference between success and failure of your company. These can be based on such things as a defined sales process or market and application expertise.
- Services: Specifically define the services you offer, how they are provided to your customers and by whom in your organization. Also include plans for future service offerings.
  - Target Markets/Market Analysis: What is your strategy for target markets? Why is your company focusing on these specific markets?
  - For the Market Analysis, you may need to do some research to better define why you are selecting these specific targets (such as market growth opportunities, applications specific to those segments).
- SWOT Analysis: An important step is assessing your firm's strengths, weaknesses, opportunities and threats (SWOT). A SWOT analysis is a method for conducting an assessment of your internal strengths and weaknesses, and noting the opportunities and threats external to the organization based on your market and the overall environment in which you play or wish to play.
  - Be sure to define your competition and your competitive edge, as well as how you can differentiate your offerings.
- Strategy and Implementation: Define your organizational strategy for funding new initiatives and reaching the market segments that have been defined as your primary priorities.
- Financial: It is important to assess and map out the financial details against your business goals. Key elements of the financials include a break-even analysis and profit and loss projections.

Steps to Taking Control

1. Define Your Strategy
2. Develop a Formal Business Plan
3. Streamline Your Workflow
4. Value Stream Mapping

Other considerations include:

- How fast is the business expected to grow?
- How do you intend to finance that growth?
- Are you growing slowly and producing profits?
- Do you need to hire the right talent to support your business plans? Talent is not inexpensive; do you have any staff in house that can be moved to other roles? What can you afford based on your business growth plans?
- What investments in hardware, software or other infrastructure will be required to meet these business goals?
- How will you implement profitable equipment and workflow?
- If you deliver fully integrated campaigns, can you absorb the carrying cost of longer sales cycles? Larger campaigns can incur three to six months in carrying costs during longer sales cycles.

Once you have the framework of the Business Plan defined, you can then develop the Marketing, Sales and Operational components of the plan to support those efforts.

Taking Control of Your Operations

Marketing

- Your marketing plan should contain both internal marketing strategies as well as messaging externally to customers and prospects. Internally, you must have a crisp elevator speech and key value propositions that your entire team can easily communicate.
- The plan for external communications focuses on building awareness; delivering consistent messaging; and positioning and promotion of your company through various channels, such as direct marketing, advertising, sales promotion, social media, public relations and more. The differentiating services you plan to deliver should also be used in your self-promotional efforts. "Walking the talk" is one of the most effective ways to showcase your capabilities.
- Your plan must clearly define the budgets allocated against each of your marketing efforts, a timeline for implementing, and most importantly, how you will measure the success of your marketing investments—your return on investment.

Sales

Sales and marketing are not the same. Sales strategy focuses on closing the leads that marketing generates. Your marketing plan should include programs to drive lead generation for your sales teams. Sales strategies should include:

- Sales Process: How do leads for opportunities get disseminated to your team? How do you make sure valuable leads are properly addressed? Once the opportunity is sold, who implements? How do you continue to grow this customer over time?
- Pipeline tracking: Definition of process and reporting to ensure you have a 30/60/90 day plan for activities and against which targets. What are your strategies for existing and new business?
- Compensation: Do you want to use a commission structure only, base plus commission? What solution works best in your company based on the services you are offering?

Operations

During the business planning process, you should be reviewing your current processes and workflows. An operations plan should specifically include:

- Facility: Size, capacity and location. Will you need to either consolidate your facilities or look to expand to another location?
- Equipment and Software: Based on current capacity and expected business growth and/or new product offerings, what additional equipment is required? If leases are expiring, the decision about what to do with the assets should be closely examined and in alignment with your overall business objectives. What additional software should be considered based on the services you want to provide?
- Information Systems:
  - Are there better accounting systems available? Do you have a CRM solution to help you more effectively manage sales efforts and your customer base?
  - Websites: Ongoing maintenance for internal and public sites is essential.
  - Security and privacy requirements: Based on key market segments, what do you need to be compliant?

Staffing is a subset of the Operations Plan:

- What is the management structure in your organization? Is it clearly defined and communicated?
- Are roles and responsibilities documented? Every position should have a defined job description with measurable goals and objectives for each position.
- How do you evaluate your staff? The best employees have the right combination of:
  - Knowledge and skills—what they know
  - Values and preferences—what they like to do
  - Complexity of information processing—what they can currently handle or adapt to

The first two components are fairly straightforward and relatively easily measured. The third component, their ability to handle complexity and the ability to adapt to change, is a bit more subjective.

Checklist for performing an employee evaluation

- ☐ Full listing of employees and their formal and informal reporting relationships.
- ☐ Accountability of employees for critical deliverables. This includes direct and indirect accountability, as well as taking into consideration the urgency of the deliverable.
- ☐ Determine the difficulty of replacing each employee, including existing cross-trained employees. Account for the cost of training, the ability to outsource the function, etc.
- ☐ Rank employees in terms of their results orientation based on their prior track record of performance.
- ☐ Rank employees in terms of their versatility—their ability to do many different jobs.
- ☐ Assess the demand for the skills of the job in the marketplace.
- ☐ Determine strengths and weaknesses, opportunities and threats, relative to employees.
- ☐ Create a guidance document for transitioning from current to future state (including repositioning, recruitment, outsourcing, retraining, reorganizing, etc.).

Be sure to consider how pay structures will be affected by any proposed position changes. You might find some real hidden treasures right in your own backyard that can transition to positions you need to fill.

Taking Control of Your Operations

Questions to ask yourself related to training

1. What are the goals and objectives of the training?
2. What topics by priority should be covered and to whom in the company?
3. What is the new hire training process?
4. What ongoing training will you provide to keep employees current?
5. What is the timing for training based on the topics?
6. How will you put in place performance measures to ensure that the training was effective?
7. How will you capture feedback and utilize it to update training components?

Training

Once you have articulated who you are, where your company is headed, the services you provide, your target market(s) and sales goals, the next important component is training your team.

Make sure your entire organization, from administrative staff to CSRs and production employees, can clearly communicate what your company represents, the services you deliver, to whom and why. All employees are potential evangelists for your company as they go through their work and personal lives.

- Ensure that your sales team is trained on the use of consistent sales presentations and customer proposals. They should also be able to employ planning documents and statements of work during the sales cycle, based on the services you want to deliver.
- It is important to be consistent with training, especially with new hires, so that everyone is grounded in your company positioning and services.

Step Three: Streamline Your Workflow

How efficient are your current business and production processes? A critical part of business transformation is assessing your current state. **If you only automate broken processes, you will just be able to do bad work faster.** Identifying areas for improvement throughout your organization leads to an increase in performance, an increase in capacity and higher profitability.

Having an efficient workflow is also an important enabler to uncovering many of the benefits we have been discussing here. This includes freeing up operating cash, shaving cycle time and reducing waste. Keep in mind that there are two levels to streamlining your workflow: changes that can be made in existing processes without the use of automation software; and further software-aided efficiencies. These changes are central to your ability to gain control of your operations.

Many times, improvements that free up significant time and/or cash flow can be implemented with little or no cost. Let's start by defining workflow and then tie the impact of workflow to your business objectives and goals.

What Is Workflow?

The term workflow is a misunderstood and over-used term. Workflow is often associated with a software solution rather than the process in which work flows through the production facility.

Workflow software is just one piece of the puzzle—albeit a large piece—of the overall flow of work through your operation. In Figure 8 (on the following page), each of the process boxes represents a step or "process" in the flow of work through a typical facility. Combined, this represents a workflow.

Most of the touted workflow solutions readily available today address only one specific portion of the entire workflow process. For example, many are geared to automating the prepress or imposition function but don't address the entire workflow—that is, from the time a job enters the shop through job delivery and invoicing.

The workflow that surrounds the actual printing process is where print manufacturers will find 50% to 70% of production costs. The actual printing process (applying ink or toner to paper) averages only 12% to 20% of production costs. Clients are paying for the actual printing of the job and/or execution of the campaign. Yet print manufacturers spend countless hours in non-value-add touches built into the job that negatively impact the profits. You need to know where all of the non-value-add touches are in your workflow.

These are activities or actions taken that add no real value to the product or service, making such activities or actions a form of waste. For example, you may have introduced an extra quality control check into the print production process because of a problem with a specific customer or type of job. It may have seemed like an important step at the time, but it actually did not address the problem—which would have required resolving the particular customer issue to eliminate the need for that step. These types of extra steps in the process become "business as usual" for all work going through the shop, yet they add no real value.

"The first rule of any technology used in a business is that automation applied to an efficient operation will magnify the efficiency. The second is that automation applied to an inefficient operation will magnify the inefficiency."
— Bill Gates

Understanding the true cost of a job, including all of the unnecessary touches, from estimating, quoting and order entry, through shipping and invoicing, is a critical enabler to removing production bottlenecks and reducing overall costs.

Choosing a Workflow Solution

Workflow automation solutions abound in the marketplace. When choosing a solution or solutions, the ability to interface through extensions, web services (a method of communication between two electronic devices over a network) or APIs is critical to near seamless automation of processes. A good API makes it easier to develop a program by providing all the building blocks needed for development.

For totally seamless automation, workflow solutions should be JDF compliant. JDF, or Job Definition Format, is an industry standard designed to simplify information exchange among different applications and systems. JDF-enabled workflow ensures compatibility across all staged implementations, allowing JDF-compliant equipment or software solutions to be added to the production platform without the need to rewrite extensions or integrations.

Taking Control of Your Operations

Understanding Current State

Prior to purchasing an automated workflow solution, you must evaluate, in detail, your current workflow. You must understand your bottlenecks and weaknesses. Typical print manufacturers can have more than 50 touches to produce a $250 digital print job. While this number may seem high to you, let's look at how quickly non-value-add touches can add up.

Figure 8 shows all of the processes that are required to manufacture a simple 4/4 trifold brochure. In this example, there are 8 to 12 processes required to produce that particular product. This is a good tool to use as you examine existing workflow. By adding the actual touches and process time from your manufacturing operating into the chart, you can begin to gain a good perspective on how work flows through your operation.

Each of the boxes in Figure 8 is referred to as a "process box." A process box shows tasks or activities performed to produce that particular product in your workflow. The "estimating process box" shows the number of touches (T) and the Process Time (PT) as totals. These two numbers were taken from Figure 9, delineating the number of touches (6) and the time (20) that could be required just to get an estimate out the door.

These process times may be conservative. Follow an actual estimate through your shop to see exactly how many touches and how much process time is required. Take the 6 touches and multiply that by the number of estimates you do in a day. Then multiply that number by the number of business days per year to get the total number of non-value-added touches in a year just in your estimating process. In our example of 6 touches, you can see in Figure 10 what that would equate to over a year.

The fact of the matter is that you will only win a certain percentage of these estimates, perhaps 15%. Consider the non-value-add time (waste) that this one, single process might represent for your business.

The non-value-add touches can be removed with the proper workflow in place. With 61,920 non-value-add touches per year just in your estimating process (in our example), and considering the fact that this is only one process out of 12 to complete your trifold job, it doesn't take long to see how these touches can add up to major dollars.

Repeat this process for every step in your shop:

- Estimating
- CSR
- Prepress
- Proofing
- Planning
- Production—each stop is a touch—press, cutter, folder, shrink wrap, shipping
- Invoicing
- Accounting

Figure 8. Example Work Flow Process Chart for the Discovery of Touches and Process Times

T = Touches
PT = Process Time

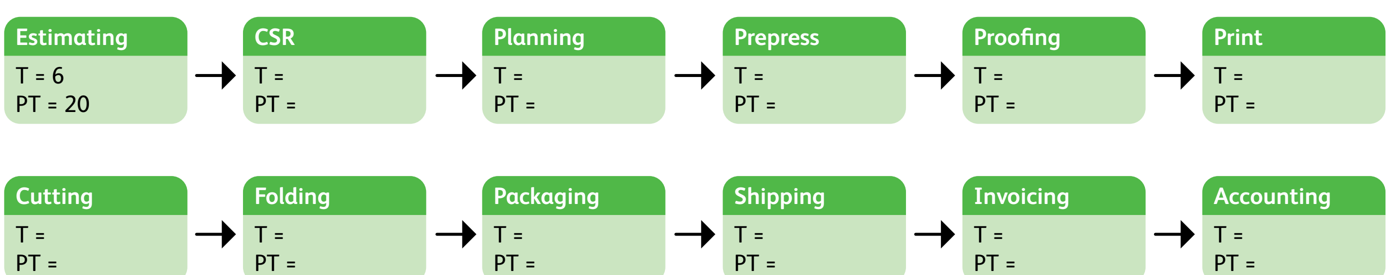


Figure 9. Calculating Touches and Process Time for Estimating

Touch	Process Time
• A sales person gets a request for a quote	2 minutes
• The sales person fills out an estimate form	2 minutes
• The estimator does the estimate	10 minutes
• The estimator gives it back to the CSR or sales person	1 minute
• The sales person okays the estimate and gives it to the CSR	2 minutes
• The CSR completes the quote and sends it to the client	3 minutes
Total 6 Touches	20 minutes

Figure 10. Calculating Touches and Process Time (Annually)

Touches

6 Touches per Estimate × Number of Estimates per Day (40) × Number of Business Days per Year (258) = 61,920 Total Touches

Process Time

20 Minutes per Estimate × Number of Estimates per Day (40) × Number of Business Days per Year (258) = 206,400 Total Minutes

This example is a very simplified method for taking into account the majority of the touches (steps) in your manufacturing process required to produce a product. Start by choosing one specific product. Don't try to automate all of your products at once. Always automate or streamline using the 75% rule—if you can streamline your inefficiencies in 75% of your products, you will increase profitability twofold or more.

When applying the 75% rule, choose the products that account for 75% of your current production. For most shops, that will consist of 8 to 12 products. The usual suspects are booklets, trifolds, sell sheets, pads, etc. Keep in mind that most of the above start with an 8.5 x 11" original size. So is 8.5 x 11" also a product? The products that are not in the 75% production group should be treated as exceptions and addressed down the road.

Now that you have your list, choose one that is representative of the different processes in your facility. Perhaps you choose to start with a trifold. Start with estimating and utilize this procedure to count all of the touches in each process of your operation. Don't forget to count such things as the need for an operator to print job tickets or read job tickets, and be sure to track time in and out for each step on each job.

Step Four: Value Stream Mapping

Value stream mapping is a useful tool that will help you capture all of your true touches, both value-add and non-value-add. Understanding and regularly using value stream mapping is critical for any modern business, including print manufacturing.

What is value stream mapping? It is a Lean Manufacturing technique used to analyze the flow of materials and information required to bring a product or service to a consumer. It is a diagram that includes every step involved, both value-creating and non-value-creating, in bringing a product from concept to launch and from order to delivery.

Value stream mapping will reveal all of the touches, process times and lead times in your current work flow process. Figure 11 is an example of a Value Stream Map.

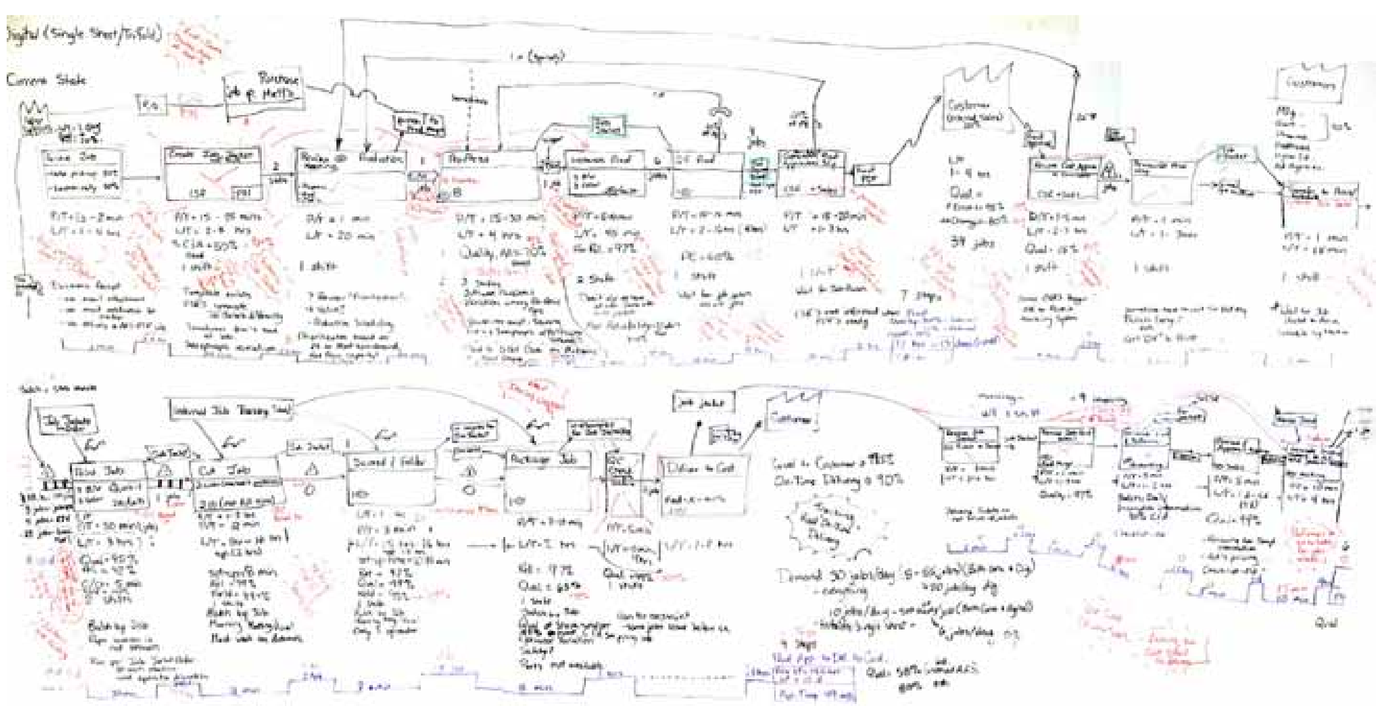
Most print manufacturers have added, over time, exception steps/touches to their workflow processes. These exceptions are often added to the process due to one-time

Taking Control of Your Operations

incidents or lack of trust in a process or person. Examples include adding extra quality control checks to catch printer errors, extra approvals due to historical errors with particular customers, or a customer services rep wanting to approve the job prior to shipping; these are exceptions that can all too easily become incorporated into standard workflow, adding many unnecessary touches. Most were added instead of actually fixing the original problem.

Once you have finished mapping the “current state” value stream, the next step is creating a “future state” value stream map. A future state map eliminates redundancies, extra touches and other waste identified in the current state map, allowing a higher level of performance in the future.

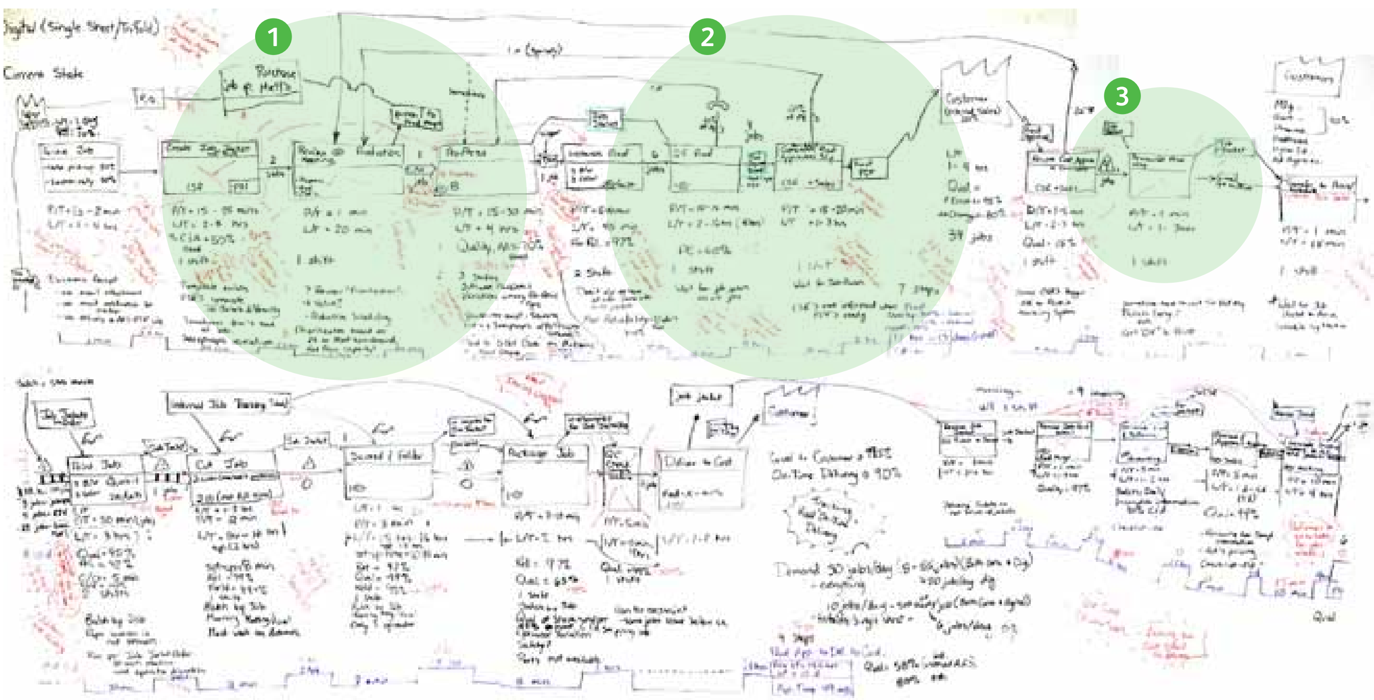
Figure 11. Example Current State Value Stream Map



Future state maps are essential in the operational plan. Many clients choose to do two future states: one is without adding automation tools—this just eliminates redundant or exception added touches and can be implemented quickly.

The highlighted areas in Figure 12 are where the most non-value-add touches can be removed without deploying any new software or equipment or spending much capital. The reduction in these process steps removed 14 touches and 30 minutes in process time per job.

Figure 12. Example Future State Value Stream Map with No New Software or Equipment



1
Area 1.
Touch/process reduction.

2
Area 2.
Touch/process reduction.

3
Area 3.
Touch/process reduction.

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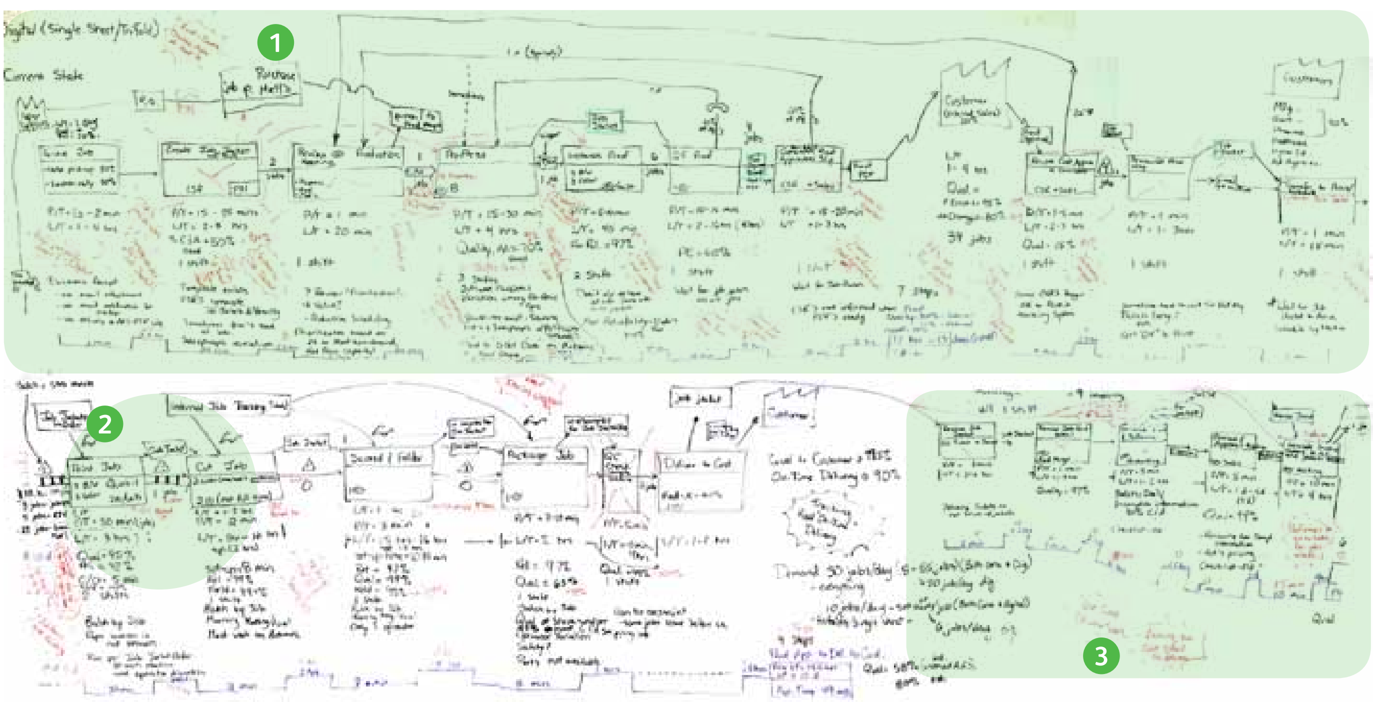
The second future state value stream map, shown in Figure 13, reflects the touches and processes that can be eliminated by adding software or equipment. This map shows a reduction of 8 to 12 touches as well as 90 minutes in reduced process time. Automating these processes reduces touches and improves productivity by 70% to 80%.

Figure 13. Future State Value Stream Map with Automation (12 – 18 months)

Web portal and automated workflow eliminated all of these non-value-add touches



Lights out automation while capturing costs

Invoicing touches reduced

1
Area 1.
Implementation.

2
Area 2.
Implementation.

3
Area 3.
Implementation.

After a preliminary value stream mapping analysis that results in removing waste without using additional technologies, the next step is to examine how automation can further eliminate non-value-add touches. This can be implemented in stages over a 6- to 30-month cycle. Figure 14 is an example of an actual implementation of the process, and the before and after state of the business.

Figure 14. State of the Business Before and After Workflow Redesign

September 2007	December 2008	June 2010
• One part time marketing person • No IT people • One Storefront • 84 Employees • Three Shifts • 43-58 Touches per job	• 10% of Staff is Marketing, IT, Database • 6 Storefronts • 70 Employees • 2 Shifts • 20 Touches to 27 Touches Depending • 50% Productivity Increase	• 20% of Staff is Marketing, IT, Database • 28 Storefronts • 54 Employees • 1 1/2 Shifts • 8 Touches to 12 Touches Depending • 75% Productivity Increase • True Lights Out Production

By improving your efficiencies and having a solid business plan in place, you will be able to take the next step: automation through software and services.

Taking Control of Your Operations

Figure 15 shows the outstanding results that a large print manufacturer achieved through a simple two-day Thought Leadership Workshop conducted at the Xerox Gil Hatch Center for Customer Innovation, delivering significant value to its bottom line and productivity.

Figure 15-A shows the current state, labeled "old," and the number of touches and process time required. Remember, process time is how long it actually takes to produce that product or conduct that activity. Figure 15-B reflects the "new" workflow, which eliminated non-value-add and redundant touches that had been incorporated into the old workflow. These improvements were achieved without any software or equipment being added.

Figure 15-B represents the savings or increased availability of man hours and improvements in productivity, respectively.

Based on an actual study recently conducted for this company, an external consultant was able to show this nine location in-plant print operation how to reduce a typical job from 54 touches to 38 touches without software or equipment purchases. This company has 9 regional print facilities that each handle 30 jobs per day, totaling 270 jobs per day for the company. By multiplying 270 jobs per day by 5 production days per week, this equates to 1,350 jobs per week times 52 weeks per year, or 70,200 jobs total per year. By eliminating one hour of process time per job as depicted in Figure 15-B, the company was able to save 70,200 man hours over a one-year period. If you divide the 70,200 hours by 52 weeks and by a 40-hour work week, this savings equates to the time of 33.75 employees.

Astounding Results

The reduction in touches without automation amounted to a substantial savings of $1,053,000. This figure was derived by multiplying 70,200 hours by $15/hour, which equals $1,053,000. When automation was added, the touches were further reduced to 18 total touches.

As you work through these analyses, it is absolutely critical to be open and honest throughout the process. Don't shortchange yourself by not counting each and every touch, no matter how trivial. Each touch costs you something, and they add up quickly as you have seen in our examples. Also keep in mind that these initiatives—from business planning, through current- and future-state value stream mapping—cannot be accomplished without the full support of the leadership team.

Figure 15. Example Value Stream Mapping Results

15-A

Old		New	
R of 0 11	PT 30	R of 0 9	PT 30
FF 7	PT 20 LT: 3 hrs	FF 4	PT 10
PROD 12	PT 1 LT: 1 hr	PROD 9	PT 45
FIN 8	PT 1 LT: 6 hrs	FIN 6	PT 50
PKG 7	PT 20 LT: 1 hr	PKG 4	PT 10
PKG 9	PT 15 LT: 4 hrs	PKG 6	PT 10

15-B

Based on 30 jobs per day at all 9 centers = 270 jobs per day overall

- 270 jobs x 5 days per week = 1,350
- 1,350 x 52 weeks = 70,200
- 70,200 hours x $12 (BHR) = $842,400
- 70,200 hours x $15 (BHR) = $1,053,000
- 70,200 hours x $55 (BHR) = $3,861,000

Are You Missing the Boat?

In 2011, Printing Industries of America collaborated with CIP4 (the industry standards body responsible for the development and maintenance of the JDF standard) to embed some questions about automation and JDF usage in its Ratios survey. The result:

- 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 over the next two years

The survey also identified the top five areas for automation among respondents:

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 were followed by pressroom and customer reporting. However, it is interesting that there is no area that received a clear majority…each print manufacturer has its own priorities, and there is no standard or consensus on what to automate first. (For more information on the Ratios, visit www.printing.org/ratios. For more information about CIP4 and JDF, visit www.cip4.org.)

The PIA study also revealed that of the 31.2% of print manufacturers who are not planning to implement automation, 51% said that they lack knowledge of process automation or lack staff training and expertise. This is no excuse; training is widely available and affordable.

This position appears to reflect a lack of interest by top management rather than a lack of resources. Print manufacturers who have begun to automate, or those who have achieved full automation, are most likely the print companies whose CEOs had the inspiration and vision to transform their organizations by following a similar roadmap as the one we have outlined here. In fact, the top reason why 31% of print manufacturers are not planning to implement automation is that they are either not aware of its benefits (28.3%) or believe that it is too costly (37.7%). As we have demonstrated in this book, they are missing the boat.

A Case Study Example

A Case in Point

A print manufacturer, Trialogue Direct in Las Vegas, turned marketing services provider in the Southwest, made a number of very strategic moves over a very short period of time that allowed a company that was losing six figures per month to transition to a profitable company in a six-month period.

Working with an outside consultant that specializes in the graphics industry, Trialogue Direct evaluated its business strengths and strategically chose as its target the vertical market and products that best fit its capabilities. A detailed business plan was developed utilizing internal and external resources. Subsequently, an in-depth future state value stream map was developed, specifically for the targeted products that Trialogue Direct wanted to promote and sell. By utilizing a value stream map for these specific products, Trialogue Direct was able to ensure that it could produce them in the most efficient manner.

A flurry of activity took place over the next two months as management and the sales force were realigned and trained, and the entire operation was trimmed of non-value-add touches and redundancies.

The sophisticated marketing tools Trialogue Direct developed and promoted according to the business plan were very well received by its targeted customer base, and this integrated direct marketing business has now doubled its sales, reduced its payroll and is very focused on its bottom line.

The Roadmap to Profitability

In this book, we have laid out the drivers for change affecting print manufacturers together with specific and actionable steps that can be taken by any printing business to transition to a business model more in line with today's market realities. Whether it is adding new capabilities, moving in a different strategic direction or simply getting your house in order, a solid business plan in conjunction with workflow process improvement will help you identify capital that will fund this vital transition.

Reducing cost is imperative in the manufacturing world in order to survive. This does not mean that the only solution is slashing your payroll. The sample we showed in Figure 15-B saved that company 70,000+ man hours per year. This equated to the time of 33+ employees. This company chose not to eliminate people, but rather, it freed up resources that enabled the company to take on more work—more profitable work—through increased production capacity. While this example happens to be a large print manufacturer, its experience is relevant to any size company. Increasing production capacity without adding equipment, software or personnel is a winning combination for any organization.

By improving your efficiencies and having a solid business plan in place, you will be able to take the next step: automation through software and services. Implementation in stages is a great way to go about bringing automated solutions to your business. You don't have to do it all at once. But you do have to do it on a consistent and ongoing basis. This is not a one-time deal; you must be relentless in rooting out waste throughout your entire operation. Every employee should be looking

Your road to profitability is right around the corner. Create the plan and get your house in order. **Begin a new future today!**

A Roadmap to Evolving Your Business

This book offers a roadmap to evolving your business. It outlines the specific steps required to transition to a new business and operating model that is better aligned with the requirements of today's marketplace and that has the flexibility to continue to evolve—profitably—into the future. It does not delve into the specific markets your business should pursue, since that will vary from business to business. But it will take you through the steps to "get your house" in order. It will provide you with the necessary action steps that will better position you to increase profitability and to more easily finance your transition with existing capital you may not even realize you have in your company. The roadmap laid out in this book applies to all businesses. Taking this path is essential in order to successfully restructure current capabilities or add new capabilities to your company.

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