WHAT DOES LEAN REALLY MEAN?

Kathy McHugh explains the principles behind Lean Manufacturing and how print companies can achieve the best results

Kathy McHugh

There has been a lot of chatter within the printing industry about Lean Manufacturing. But what does the term really mean? And why has it taken so long to take hold in the printing industry when other manufacturing sectors have been benefiting from lean for years?

According to Wikipedia: "Lean manufacturing or lean production, often simply, 'Lean,' is a production practice that considers the expenditure of resources for any goal other than the creation of value for the end customer to be wasteful, and thus a target for elimination. Working from the perspective of the customer who consumes a product or service, 'value' is defined as any action or process that a customer would be willing to pay for. Basically, Lean is centred on preserving value with less work." Thus, Lean is focused on getting the right things to the right place at the right time in the right quantity to achieve perfect work flow, while minimising waste and being flexible and able to change. And that's a mouthful.

Let's face it, the principles of Lean Manufacturing are mostly common sense. So why has it taken so long for printing to see the Lean light? One reason is that we have always considered ourselves as custom job shops; every job that comes in the door is different, so there was no perceived way to make the process more efficient except to buy bigger, faster presses to get the work out of the door more quickly, or add more workers to bindery to speed up the many manual processes in that department.

That approach no longer works in today's highly technical, fast-paced world. Sure, you can improve throughput with a faster press but, if the processes that get the job to the press or through bindery and out of the door are broken or inefficient, you are simply moving the bottleneck to another part of the operation.

Besides, are we really custom job shops? Isn't that concept a thing of the past? After all, a brochure is a brochure is a brochure. Certainly, the content is different from brochure to brochure, but what is so different about the production process? Savvy print service providers have taken steps to productise their offerings and standardise processes wherever they can. Look at Vistaprint. Producing more than 54,000 jobs per day could certainly qualify them as a 'custom job shop', but in reality, Vistaprint has productised its offerings and removed every scrap of waste from A to Z. It is hard to imagine anything happening in the Vistaprint plant that does not represent value a customer will pay for. And they do pay for it – 67% of Vistaprint's customers are repeat customers!

ASSESSING WORKING PROCEDURES

For the printing industry, Lean Manufacturing means stepping back and taking a critical look at your operation from end to end. How does work come in the door? What happens to it throughout every step, from estimating and production planning, through prepress, production, bindery, shipping, and finally, invoicing and collection? Who touches it at each step? Where do they travel during the process? How many steps are retraced? How much wait time is there while the job moves from department to department or sits idle while materials are pulled from inventory? How much time do employees spend conveying critical information to each other or tracking each other down to gain that critical information? Most companies who have taken the time to do this analysis have been shocked at what they found. They have been shocked at the waste of time, resources, effort and even materials that went into producing each and every project, and they have taken steps to eliminate that waste.

Remember that the key to Lean is to preserve value – value defined by what the customer will pay for – with less work. This means more dollars in your pocket and less overall waste in your plant. Take the time to do this analysis for yourself and see what the impact will be on your plant. You will never regret this investment and you will never look back.

Speaking of impact, let's take a look at the whole concept of chemistry. Conventional printing operations use a lot of noxious chemicals. Perhaps that is our dirty little secret. Do these chemicals represent value that customers will pay for? In some cases, yes, because there is no other way to produce, for example, a million copies of *Time Magazine*. But, in most cases, in a world where short runs and fast turns are the name of the game, there are options to remove most, if not all, of these expensive, dangerous

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and non-value-added chemicals from the printing operation. An increasing number of companies are doing just that. Chemistry-free platemaking has been an option for more than two decades since Presstek first brought it to market; for the majority of offset print projects, chemistry-free plates meet or exceed quality requirements, optimise make-ready on the press, and have sufficient durability for today's shorter run lengths. Think of the steps and costs that are eliminated by making that one simple change.

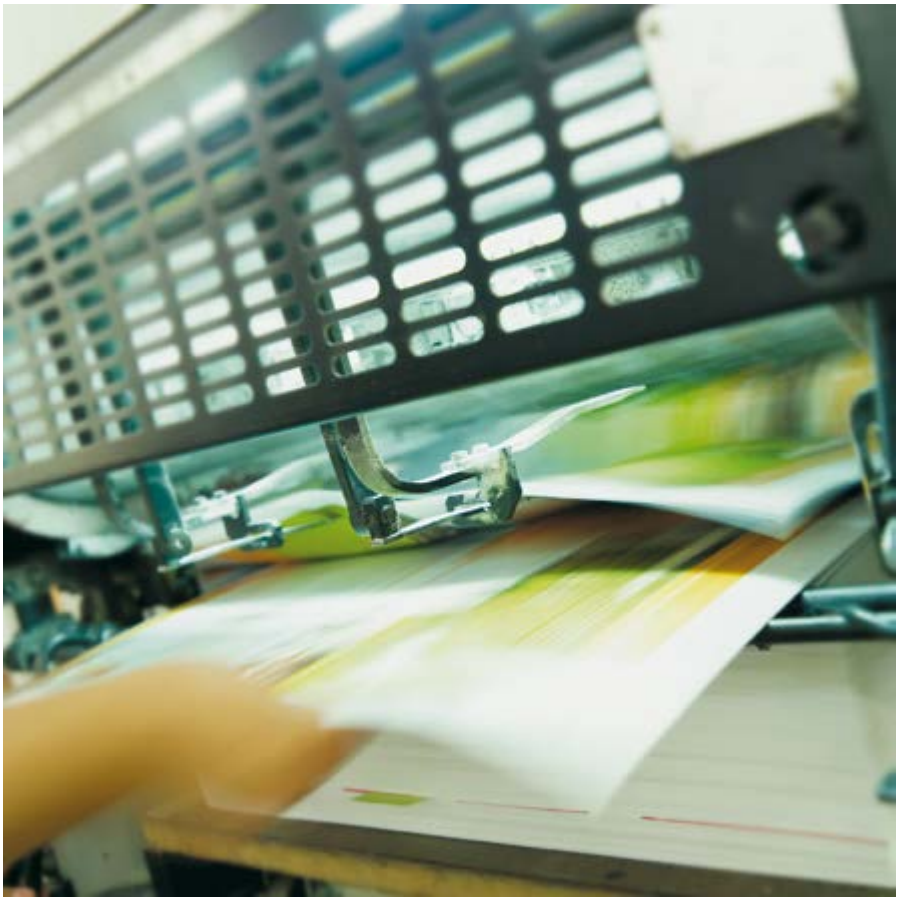
THE VALUE OF WEB-TO-PRINT

How does work enter your plant? Do you have a web-to-print solution, an online storefront? Not only does this reduce the administrative costs of bringing work in to the plant, it can also reduce errors and provide a platform for automating a wide range of activities, from quoting and estimating, to imposition and scheduling. This is a value that customers will pay for. They love the convenience of 24/7 access. They love the ease of reprints, or the ability to make minor adjustments to standard templates to create customised documents. If implemented correctly, it reduces cost and cycle time for you and for them. Of course, they are still going to want to talk to you, so you need to make that part easy as well. But you will be amazed at how much time and aggravation is saved by simply adding a web-to-print front end.

What type of workflow do you have in place once the job is in the plant? How close to 'lights out' operation does it allow you to get? Can you afford all the touches involved in these smaller, more frequent jobs? One shop calculated that it was saving $40 per job that came in via the web. Okay, if you are doing a $50,000 annual report, maybe $40 is nothing. But if you are printing 1,000 sell sheets, it could be the make or break difference on job profitability. You may be surprised at the array of affordable solutions available in the marketplace that can revolutionise the way you work.

And what about an MIS system? Can you determine on a real-time basis how much a job is costing you, or how profitable a given customer is? Does your staff have instant access to all the information about a job from any terminal in the plant? This is easily doable today. There is no more need to have a paper job ticket waltzing its way inefficiently through the plant. Enter data once and have it instantly available to anyone in the plant that needs access to it to do their job. This is the world today, and it is not that difficult to achieve.

What about your offset presses? How much make-ready waste do they generate? How long does it take you for job changeover? Some of today's digital offset presses, such as the Presstek 75DI, offer job changeover as fast as six minutes, including on-press chemistry-free platemaking. Do the math. What's your average make-ready today and how much more throughput could you achieve by reducing it to six minutes or less? This is value a customer will pay for. What a customer will not knowingly pay for is all that paper waste when you have to run 250 to 300 sheets of paper through the press just to get up to colour. When is the last time a customer told you: "Oh, just take your time? Whenever you can get that job done, it's fine with me. No worries."



Lean is centred on preserving value with less work

Bindery may be the scariest part of this analysis. While it is possible to automate many bindery operations, many are still heavily manual. And the bindery is where it all comes together. If any other part of the process has a problem, bindery will pay the price. On the flip side, if there is excessive spoilage in bindery, you may have to start the job all over again, at great expense. And that is not value the customer will pay for.

COMMON SENSE

We started out by talking about the fact that Lean is mostly common sense. Yes, you can get very technical and very process orientated with Lean. But it doesn't have to be that complicated to make a big difference in your operation. Take that walk-through, and take off those rose-coloured glasses before you do so. Be critical. Be observant. Talk to the folks who are redoing work or spending a great deal of time doing repetitive, redundant tasks. Look for the low hanging fruit and start picking away at it. Pick some metrics and measure before and after you make changes. Simple changes in work process can make a big difference, but you should also be seeking out technology investments that will enable you to optimise job flow through the shop and automate everything that can possibly be automated.

Do some reading: Google 'Lean Manufacturing' and see what you come up with. Ask your peers how they are learning about Lean. Check out publications offered by the Printing Industries of America on the subject. Visit IPA.org and check out its extremely affordable eLean online training. Take the training yourself or designate key people in your organisation to do so.

Once you take that initial walk-through, you will realise there is much that can be done to make your operation more efficient, profitable, and of more value to your customers. Then get to work. ■

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