

Volume 13, Issue 41 **October 09, 2006***Important Dates to add to your calendar...*

- ❑ **Oct 11th, 12:00-3:30 HPM GMT Meeting.** Host: COM DEV Space, Cambridge
- ❑ **Oct 16-20th, 2006 22nd AME International Lean Conference** in Dallas – 1,650 now makes it the largest Lean conference ever in North America. Each signup now sets a new record. www.ameconference.org
- ❑ **Nov 22nd, 11:30-5:00 HPM Board Meeting.** Host: Gerrie Electric, Burlington. Learning component will highlight Jay Myers, Chief Economist and Sr. VP CME who will bring his annual Economic Update. The Leveraging component will include details on Gerrie Electric's 5S Implementation
- ❑ **Nov 29th, 8:30-4:30 HPM Share Showcase** – See the diversity & harvest innovative ideas from each HPM'er.

*"We have enough people who tell it like it is
– now we could use a few who tell it like it can be."*

Robert Orben

Maintaining the right Perspective

Here are a couple of valuable responses extracted from our friend Jim Clemmer's Leader Letter – a first class (no cost) newsletter for leaders at all levels. Jim's newsletter is recommended without hesitation to HPM members in leader roles – and it's available by signing up on www.clemmer.net & then clicking on 'subscribe'

*"Whenever I hear someone tell me that they "don't have time to learn", I always find it useful to ask them to **substitute the word "improve" for the word "learn"** and then ask how they like the result.*

"Learning" is a sometimes cold-blooded exercise that is easy to dismiss, whereas "improving" is an unarguably desirable goal that leaves no wiggle-room for procrastination. Learning isn't just some necessary evil that we were finished with after our schooling, but a lifelong process that is indispensable to our continuing growth and improvement as human beings.

*Therefore, the phrase "I don't have time to learn", is actually equivalent to **"I don't have time to improve"**. This latter sentiment is poison to both our professional development and to our own fulfillment as individuals, and the act of casting it into such stark equivalence strips the original sentiment of its detachment and unveils what is really at stake."*

- Barry Chow, Executive Vice President, Resiance Corporation, Calgary, AB

"Culture to A Company is what Personality is to a Person."

Dr. Peter M. Senge

A Message from Boeing CFO Mike Sears

"My challenge for management is straight-forward: Get on board with Lean. Support your people who are pursuing it, and leverage their ideas. Don't be a roadblock and burden your teams with excessive requirements to prove Lean concepts through business cases before implementing them.

There's more than enough evidence to support the fact that Lean works, and an occasional "leap of faith" is OK. And don't expect to find cookie-cutter approaches for injecting Lean into your operations. Nothing is easy, and lean is hard work. But the payoff – for everyone involved – is proving to be well worth it.

Mike Sears, CFO - The Boeing Co., April 2001

What is significant about the above message is not who said it but what the message contained. There are failures in the implementation of lean, and depending on who you talk to they can be as high as 70-80%. However, if the management teams who conceived the Lean strategy were to support their implementation teams in accordance with the spirit of Mike's message the failure rates would plummet.

We ALL need to know that Lean is about identifying & eliminating waste everywhere in the value stream - while adding value for the customer

A big thank you to Trevor, Betty, and the Team in Winnipeg for this insightful article from their newsletter "The Industrial Technology Centre Advanced Manufacturing News"

Usually, the areas that are concentrated upon are on the manufacturing floor. However, many times the wastes found are a result of poor designs. I'm sure that this poor design is not intentional. But it is an indication that the "down stream customer," whether it's the internal manufacturing customer or the external end-user, may not have been carefully considered during the design process. So there has to be a process for the designer to receive feedback early in the design phase, not a year later, after production

**"Do or do not.
There is no Try."**

Yoda

has already taken place, so that the product is manufactured "right the first time."

Taichi Ohno first outlined the concept of the seven wastes almost 50 years ago, recognizing that waste drives up cost. The seven wastes are inherent in ALL processes. In a recent article in *Lean Directions*, the authors identify how the seven wastes relate to product design. They suggest that in order to design-in lean principles, "designers and engineers must make lean thinking second nature." They need to essentially "see" the seven wastes on the factory floor for what they are – a result of the product design. Seeing the waste will help them recognize the behaviors and tactics that create the waste.

Design Wastes

1. **Overproduction** – is the "waste of producing a product, service, or information before the customer needs it, or producing more than is needed." How does design contribute to this waste? By:
 - Expanding the scope of the requirements (adding features that aren't tied to customer or market requirements)
 - Including too many options or details on how to test or make the product, dictating the manufacturing process
 - Creating designs that require batch production; i.e. specialized materials, sole source, high-cost setup, low yield
2. **Transportation** – is movement of products or materials or information that does not add value. Product design contributes to this waste by:
 - Not considering how large, heavy, or awkward items will be handled in production
 - Creating design with multiple parts that could have been simpler
 - Specifying parts that require purchasing from a great distance away
3. **Motion** – is movement that doesn't add value – searching, walking, sorting, bending, etc. Design can contribute to motion waste by:
 - Not creating "open" designs for easy use, requiring repetitive motion in manufacturing or maintenance.
 - Creating designs that are not easily oriented for use, maintenance, manufacturing; lack of symmetry requires more motion in production.

Oil Sands Over 100 Billion in Next 15 Years

So What? Join Jay Myers this Wednesday to see if you can share in this huge unfolding investment.

Alberta Mfrs. are turning work away because they do not have the people... and for those who don't want to turn work away – it becomes a matter of who to contract the work to.

And Why Not to Ontario? Why not You?

A good question. CME, with Jay Myers leading the charge, is spearheading a chance for us to become part of our Alberta colleagues Supply Chain.

This Coming Wednesday, Oct. 11th – 3-5:30 pm at the Kitchener Holiday Inn, 30 Fairway Road South, there will be an INFORMATION SESSION for Ontario Mfrs. Representatives from the Alberta manufacturing sector (including 2 manufacturers) will be at the hotel to talk with you. This is serious - they are here to see if there is interest. **Contact Marie Morden at CME at 905-672-1764 to register.**

4. **Waiting** – is "idle time in manufacturing created when material, information, people, or equipment is not ready." Product design can cause waiting downstream by:
 - Testing and verifying at the wrong level for process feedback and correction.
 - Delaying production due to incomplete or inaccurate information
 - "Design programs strive for zero risk and are therefore never quite done for the required schedules."
 - Creating designs that don't anticipate improvements, such as the insertion of technology.
5. **Overprocessing** – is effort that adds no value from the customer's view. Analyzing, inspecting, validating, multiple machining or assemblies are symptoms of overprocessing waste. The product's design can generate this waste by:
 - Creating designs without thought for the production process, attempting to meet "over-specified precision."
 - Specifying and requiring source control that add no value and are limiting.
 - Creating complex designs requiring complex manufacturing processes.
6. **Inventory** – is more material or information than is needed to serve the customer right now. Part costs include more than material and labour for manufacturing it. Costs are also associated with material handling and purchasing, data processing, manufacturing engineering, QA, inventory control, warehousing, etc.
7. **Defects** – are work that contains errors, mistakes, or lacks something. This waste is usually

obvious – it requires rework, analysis, problem solving, fighting fires, scrapping. Design has the greatest impact and potential for correction and savings in this area. A badly designed part is one that can be:

- assembled wrong
- used incorrectly
- has missing design data
- requires precision or tight tolerances resulting in low yields
- doesn't meet customer requirements ...resulting in creating waste.

Yesterday's "fix it later" has become "do it right the first time" or "first unit correct," which results in rapid time-to-market.

Source: Industrial Technology Centre Advanced Manufacturing News, Canada

Which 3 lean books would you bring to a desert island?

Bill Kluck asked this question on the NWLEAN Network. Here's the top 8 choices listed – see the first 3.

1. Lean Thinking / Womack
2. The Goal / Goldratt & Cox
3. Learning to See / Rother & Shook
4. Gemba Kaizen / Imai
5. A Study of the Toyota Production System / Shingo
6. Lean Production Simplified / Dennis
7. JIT Implementation Manual / Hirano
8. The Toyota Way / Liker

Avoiding Common VSM Pitfalls

Our acknowledgments go to Chris, the editor of AME UK's fine Newsletter for this article which features our good friend Mike Rother who, with John Shook, pioneered that first book "Learning to See" that got Value Stream Mapping started.

I first read Mike's article on the SME website and asked if we could publish it in the AME-UK Newsletter. His answer was a resounding 'No' because he felt the article was out of date. And he offered to update the article for us, so we are the first to publish the updated version. Thanks to Mike, to the Lean Enterprise Institute in the USA and to the SME for allowing us use of the article. Check out the excellent Lean Newsletter on www.SME.org – it is free and their store is excellent.

In 1997 I co-authored the book Learning to See with my colleague John Shook. Our goal was to help people on the Lean path widen their perspectives from a then pervasive and limited focus on process-level improvement to the overall flow, or value

High Value Webinar with Jim Womack

If you can sit in on this one **Oct. 19th @ 2pm** – do it. Jim Womack, the Kitchener Conference's key keynote, will be joined by John Shook, the first American ever to work as a manager in Toyota's operations in Japan.

To register, go to the following website: ----

http://www.lean.org/Events/WebinarDescription.s.cfm?Trackingcode=EML_INVIT_100206

If this is a problem go to www.lean.org and look for the Webinar hyperlink.

stream. After years of improving individual processes it was the right time to also start thinking about tying those processes together and improving the flow from dock to dock.

The value stream perspective represents a shift from traditional vertical thinking to horizontal thinking. This means looking across the silos of individual functions and departments to connect activities in the stream of value flowing from suppliers through the organization, and on to customers. In other words, looking at overall flow means also looking at system efficiency rather than at only the point efficiency of individual elements in your organization.

While our book has helped many thousands of people expand their perspectives -- it has even been translated into 15 languages -- any publication is subject to various interpretations by its readers, which can lead to some pitfalls. Here is a look at some we have observed, and how you can avoid them:

Some readers appear to think that value stream mapping is in itself a goal.

They tell us, "We are drawing maps of all our value streams!" This may lead to a better understanding of your flows, but not necessarily to any measurable improvement. Improvement comes from trying to take steps toward a target condition; a condition that goes beyond what is possible today. Value stream mapping can be a useful tool in this pursuit, yet it is still only a tool, not the actual improvement itself.

Instead of mapping everything and expecting good things to happen, it is more effective to start by improving one value-adding process in a value stream -- typically the assembly process -- with rapid PDCA cycles. Then progressively migrate into more

of the value stream and support functions as is necessary to be able to further improve that assembly process. This way you will always be working on what you need to be working on.

In this sense there are two general categories of mapping:

1) A rapid walk through, or scan, and sketch of a value stream (say in one day or less) in order to get oriented before you deep dive into one value-adding process as described above.

2) A detailed analysis and future-state design, typically two to three years out, in order to drive several shorter-term improvement projects that will ultimately link together. These sorts of maps take more time to prepare and become increasingly useful as you migrate from assembly into the value stream.

Generally I tend to begin with a scanning map as described in 1) above, because otherwise you easily get into too much information and end up staying at too much of a surface level.

Stay at a 50-ft. altitude the first few times you walk through a dock-to-dock flow.

If you immediately get into to a very detailed level of analysis at every process you encounter you'll lose the overall flow perspective. Instead, begin by walking through at a "high altitude," and then progressively drop down to add detail as necessary on successive walk-throughs. The first walk-through may only take an hour and will result in just a rough sketch of the current-state flow. (Sometimes I tell mappers that during their first walk-through they may walk faster or slower, but they are not allowed to stop moving.)

Avoid an overemphasis on tallying inventory.

Lead time is a great metric, and you should strive to reduce it. (Note that outsourcing lead time does not equal reducing it.) It is fun -- like a scavenger hunt -- to find and tally inventory accumulations and useful to use this data to estimate the lead time from dock to dock. But don't let this become more important than understanding why the inventory is there.

Inventory accumulations tell you where the flow of value has to be interrupted because of process problems. When you find such breaks in the flow a good question to ask is, "What is causing us to hold this much inventory here?"

Inventory is always there for a reason. Go after the reasons.

Don't reach too far out into the future.

If you have drawn more than about six kaizen lightning bursts on a future state map you are probably getting ahead of yourself. Instead, sketch out where you would like to be in two or three years to give a sense of direction. Then draw up a target condition anywhere from a few weeks to no more than 12 months out; depending on your level of improvement experience and capacity. As you work toward this target condition step-by-step you will gain experience and insights that will influence the next target condition you set for yourself.

Continuous improvement requires the challenge of target conditions.

Mapping helps you see the big picture, but you also always need a specific, measurable and challenging target condition for any process that you want to improve. With that defined you can ask yourself two elegant questions: 1) "What is preventing us from achieving the target condition at this process?", and 2) "What is our next step for moving toward the target condition?"

Roll up your sleeves, observe the process carefully to understand the causes of the problem, get creative and use PDCA (Trial and Error) to develop solutions, one problem at a time. If you hold fast to your target condition and keep asking those two questions you can find solutions that you once thought impossible. This, in a general sense, is how Toyota moves forward.

And once a target condition at a process is achieved you need a next target condition, or else continuous improvement will stop and performance will tend to slip back. So I wish you and your team some interesting challenges, at both the process and system levels.

About the author

Mike Rother is the co-author of two groundbreaking LEI workbooks, "Learning to See: value-stream mapping to add value and eliminate muda," which received a Shingo Research Prize in 1999 and "Creating Continuous Flow: an action guide for managers, engineers and production associates," which received a Shingo prize in 2003. He co-developed the accompanying "Training to See" kit that teaches facilitators how to run value-stream mapping workshops. Mike studies Toyota and is affiliated with the University of Michigan Department of Industrial and Operations Engineering and the Lean Management Institute in Aachen, Germany. Mike began his career with the manufacturing division of Thyssen AG in Germany. He lives in Ann Arbor, MI, and Cologne, Germany.