HPM CONSORTIUM

The Weekly Update

High Performance Manufacturing Consortium *Making World Class Make Sense*

Volume 11, Issue 46 ❑ November 15, 2004

Important Dates to add to your calendar...

- ❑ **Nov 24th AME Event: Case Study: BUILDING A WORLD CLASS WORKPLACE FOR A WORLD CLASS WORKFORCE** ~ Integrating Wellness into a Healthy Workplace that is supported by the workforce. **Host: Canada Post** – For full info check HPM Website
- ❑ **Dec 1st AME/HPM 8:00 to 5:00pm "Breaking the Safety Barrier: *Implementing Culture Change*"** Dr. Steven Simon. A 1-Day intense culture change workshop. **Call AME: 905-681-3960**
- ❑ **Dec 6-7th The Lean Design Workshop –** 2-intense 8-5 pm days with North America's best Design & Project Management leader– **Ron Mascitelli.** His new book is included. Designed for those who need ***more products faster*** to lead and survive
- ❑ **Dec 9th The Lean Accounting Roundtable –** A ***frank exchange among implementers*** that will help protect one's investment in Lean strategies.
- ❑ **Jun 6-10 (2005): "Implementing & Sustaining Lean Thinking Across the Enterprise"** An AME major Practical Lean Conference in Edmonton. www.measureupforsucess.com

Here's a few jewels we can all relate to – they are shared under the heading of 'lessons learned…' On the positive side… they do provide us with baselines for our "Standard Work strategies" to make our going forward faster and of more value: The Lessons?

- o *When you harbor bitterness, happiness will dock some where else*
- o *That life is like a roll of toilet paper. The closer it gets to the end, the faster it goes.*
- o *That money doesn't buy class.*
- o ***That it's those small daily happenings that make life so spectacular.***
- o *That under everyone's hard shell is someone who wants to be appreciated and loved.*
- o ***That to ignore the facts does not change the facts.***
- o *That when you plan to get even with someone, you are only letting that person continue to hurt you.*
- o *That the easiest way for me to grow as a person is to surround myself with people* ***smarter than I am.***
- o *That everyone deserves to be greeted with a smile.*
- o *That no one is perfect until you fall in love with them.*
- o ***That opportunity is never lost; someone will take the ones you miss.***
- o *That one should keep his words both soft and tender, because tomorrow He may have to eat them.*
- o *That I can't choose how I feel,* ***but I can choose what I do about it.***
- o *That everyone wants to live on top of the mountain,* ***but all the happiness and growth occurs while you're climbing it.***
- o *That it is best to give advice in only two circumstances; when it is requested and when it is a life threatening situation.*

I wonder… How come one company in the US that impacts about 1% of the workforce in mfg., is not in the least concerned about pursuing outsourcing to China, India, etc. The company? It's Toyota. What is wrong with this picture?

Elections to HPM's General Management Team (GMT) Coming at Nov. 4th Board Meeting

Two Positions to be Filled:

Chair of Vision: Incumbent, Dennis Wild, Willow

Chair of Finance: Incumbent, Alan Tribe, Mancor

Positions serve for two years. Next year, positions of Board Chair, Chair of Alliances & Opportunities and the Co-Chairs of Leveraging and Learning will be elected

Nominations are open now. AME'ers – Send your nominations to Dave at info@hpmconsortium.ca You do not need to include a seconder.

A Small Office of Value?

There's a 278 square foot one-room office with a window right beside the HPM office in the Tall Pines Centre, at 10 Pioneer Drive in Kitchener. If this serves your purposes – plus having friendly HPM neighbors – contact 519-503-8551.

RFID's ROI… *Benefits & costs still being defined.*

Industry Week Magazine, Nov. 1, 2004

By John S. McClenahen and Traci Purdum

Within a few years, RFID (Radio Frequency Identification) tags on pallets and products could be as ubiquitous as bar codes now are, providing the manufacturing supply chain with more production and distribution data. But even with a limited mandate from retail giant Wal-Mart for its top 100 suppliers to use RFID beginning next year (See Factory To Foxhole: RFID Deadline Looms), the technology still is being defined, as are its benefits and costs.

Compared with bar codes, RFID promises to be a more accurate way of inspecting and tracking products, indicates Todd Warden, vice president of business development at **Markem Corp.**, a Keene, N.H.-based maker of product identification equipment and software. Indeed, being better able to understand the flow of work through a plant and knowing where assets are two distinct benefits of RFID technology, says Jeff Wacker, an EDS Fellow and futurist at Electronic Data Systems Corp., Plano, Texas. "There are estimates that up to 30% of a capital budget is for items that are lost or stolen -- not where they should be when people need to use them," he relates. And in those instances where the absence of critical components keeps work from being done, "it's not just the capital budget that you hit but also the operational budget," Wacker emphasizes.

Other RFID benefits to manufacturers, made possible by the extent of chip-contained data, include an enhanced ability to screen out counterfeit parts coming into the plant, the opportunity to improve decision-making and the provision

of better after-sales customer care, whether it's recalling a product or streaming enhanced features to it, he adds. "You get a much more visible and secure chain by deploying the technology," states Markem's Warden.

On the cost side of the value equation, tags range from 55 cents to $55 each; readers run about $2,000; a local server is about $5,000, and a encoding printer runs about $5,000, figures EDS' Wacker. Also needed are machines to put the tags on products and software to manage the data being generated, adds Warden. "As the price of tags comes down, the economics will work such that [people] can start putting them on lower-priced items," predicts Warden. Tag costs are coming down and are likely to continue to do so until they reach what Wacker terms "the end of silicon." At that point new technology will be needed to drive tag costs below 7 cents each. "There are technologies on the horizon, but they are five years out," says Wacker.

Over the long term, Wacker believes, companies really won't have a choice but to adopt RFID. But both he and Michael Putnam, product marketing manager for RFID/AI at Markem, say that companies, generally, are still trying to assess what the returns on their investments will be at the enterprise level. They're asking: What are the physical infrastructure costs? What are the supply-chain savings? What will be the revenues from offering customers more?

Rethinking a Lean stumbling block – the development of the "Future State Map"… *without which, a 'Go Forward' strategy has little value.*

New – From our good friend Dan Jones, last year's Conference Keynoter and the founder of the UK Lean Academy. *Today's insights?*

"Dear Dave,

Is Lean So Hard?

We recently had a visit from the Managing Director of a small engineering firm seeking help on his lean journey. His first port of call was his local university, one of the most prestigious in the country. They sent two postgraduate students to show him how to draw a Value Stream Map. However they stumbled when it came to deciding what to do next. I see this all the time firms with Current State maps but no Future State map and no Action Plan to implement it. Yet this is one of the key steps in going lean.

By chance I met these same postgraduate students at the Manufacturer Live event in Telford in September. They struck me as smart students with a good knowledge of the lean tools. Yet they confessed they did not know how to construct a Future State map for this plant, despite having read the right books. This set me thinking. With the plethora of advice on lean and all the workshops on value stream mapping, why is it so hard to make this essential step, even for the smartest people? What is holding you back?

There are of course, some obvious reasons. If no one is given responsibility for straightening out the value stream as it crosses departments then no one is really going to bother to draw a Future State map, let alone implement it. If you do not have support from top management then even the best intentioned lean initiatives are going to run into the sand. Also, if your first map reveals so much low hanging fruit then it is not surprising if people go after that, rather than do the more heavy lifting in changing the way things work.

Another common reason is that employees recognize the need to move from making large batches to flowing products through the plant. But they are frustrated in doing so by the lack of basic stability in their operations and in their equipment. Which is why so much attention needs to be devoted to creating standard operations, improving machine availability, reducing changeover times, improving bottleneck processes, etc.

But even if this is a long road, there is a danger of pursuing this work without a clear plan of march. You can spend a lot of time creating islands of stability that are hard to sustain unless they are tightly linked. A Lean Value Stream Plan from a Future State map is the way to leverage the synergy between Six Sigma, TPM and Lean and to create flow that lasts.

Another stumbling block seems to be the concepts of takt time and the pacemaker process, how to establish the appropriate rhythm for the value stream and where to trigger it. A really helpful insight is to recognize that you are almost certainly making several different types of products with quite different demand characteristics that require different and not common solutions. People often think lean is about building everything to order, whereas this is not always the case, in many cases it is about rapidly replenishing stock the customer has just purchased.

If you start by analyzing your product families by process route and by frequency of demand, you will discover a few high volume products that account for the bulk of your output. These should be made-to-stock with the customer pulling from a pacemaker at the end of the value stream. At the other end of the scale you may well have a tail of low volume products, accounting for a small fraction of your output, that have to be made-to-order from a pacemaker at the beginning of the value stream. Map these value streams separately and treat them as two quite separate projects. Over time it may well be possible to combine these two into a mixed-model pull system, but probably not initially.

The final stumbling block is hidden in your information flow. Where stability is the foundation for creating flow, heijunka or leveling is the foundation for creating pull. Without leveling you are fighting an uphill battle against constantly changing schedules and fire-fighting. We have been brainwashed to think that the only way round this problem is by holding stocks and better IT systems that can improve the forecasts on which our schedules are built. In fact there is a lot we can do to smooth the order signal from our customers. However constantly changing schedules are in fact a symptom of a deeper problem, the batch logic in our scheduling systems. I will return to this topic in a future e-letter.

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"Most people are willing to change, not because of the light, but because they feel the heat."

"Some folks change jobs, mates and friends – but never think of changing themselves."

You may well have encountered different obstacles in deciding what your Future State map should look like. Others of you might have created your Future State maps but have struggled to implement them. I would be interested to hear about both problems, and how you think they can be overcome. Difficult questions are rich food for Lean Thinkers to ponder upon. If we can't crack this one then we are not going to make much progress with lean.

Yours sincerely

Professor Daniel T Jones, Chair, Lean Enterprise Academy

PS. Workbooks like Learning to See and Creating Level Pull contain much of the Toyota wisdom you need. www.leanuk.org

Excess Inventory – *Does everyone understand the evil that lurks beneath?*

We walk through plants every day. And what is on people's minds usually gets done – however, in many plants, the sheer excess of inventory is acknowledged but often without understanding the degree of the evil. Here are a few reminders - thanks to Jim Hunt at Weber Aircraft:

One more time… the Evils of Excess Inventory

- *Limited Liquidity of cashflow- Money tied up in inventory-Can't spend it on new equipment.*
- *Covers up problems-People are happy and carefree with excess -no problem solving culture.*
- *Worst kind of waste.*
- *Blueprint changes equal rework, on-hand inventory, scrap, obsolescence & replacement.*
- *Blueprint change equals slow response, slow reaction. Excess inventory multiplies the problem.*
- *Slow or nonexistent response to "fix" simple mfg. issues. Can't locate the exact problem. No 8D.*
- *More obsolete parts to scrap.*
- *More manpower and sq. footage to maintain stockroom. (i.e. fork-lift, cherry picker, overhead storage, carousel, documentation, transactions, off-site warehouse, transportation to and from a central store, overhead expense, etc...)*
- *Inaccurate costing of parts.*
- *Lead time difficult to determine.*
- *May have 10,000 left handed parts and 0 right handed parts.*
- *Need more hot lists.*

In summary ---- Excess Inventory has a cascading effect. Best regards,
James Hunt, Lean Facilitator, Weber Aircraft

Get Ready – The Handwriting is on the Wall – *How do we launch more new products faster? … Begin by putting Dec. 6th and 7th on your agenda??*

"THE Lean Design Workshop"
with Ron Mascitelli – HOST: Rockwell

The Recommendation: Enroll a number of those responsible for the rapid implementation of new products in your company in the Dec. 6-7 "The Lean Product Design Workshop" with Ron Mascitelli. Ron is no stranger to Rockwell in Milwaukee.

Sending as many as you can accelerates the implementation after this two-day workshop is over. One Cambridge firm is sending a team of 6 with the clear understanding that results are expected quickly.

Call Nicole to Register – or register on line at www.hpmconsortium.com under 'Events"

The Issue: Advice from the huge Lean Conference in Cincinnati this year – plus projections by governments, associations & consultants – point to the need for a **'rapid new product strategy'** to counter the competition coming at us from the Chinese megalith (and others). ***Shifting our focus to launching more new products faster and cheaper is seen as a better strategy than trying to beat them on commodities which is often not possible!***

The Signs of an Early Response

In October, Canada's **National Research Council** launched a revision to the "**Lean Product/Process Design & Development"** previously delivered across Canada by Ron Mascitelli some three years ago.

This revision translates the core of Ron's wisdom into three one-day courses that will be launched in the New Year although Alberta is looking to begin immediately. As a result of the NRC project a dozen consulting folks from coast-to-coast in Canada were trained in October to address local needs. HPS's Scott Masich has completed the training which was run in two parts at the NRC IMTI Centre at the University of Western Ontario in London in the first week of October – with the second 3-day session completed in Calgary on October 27-29th.

This Workshop is Outstanding – and Practical

Upon completion of this two-day interactive training session, participants will:

1. Understand the true cost build-up of any product.
2. Utilize twenty cost "levers" to perform cost-reduction trade-offs.
3. Improve customer communication and value capture.
4. Identify synergy across product lines through flexible platform strategies.
5. Eliminate design waste through value engineering.
6. Implement a simplified version of Toyota 's 3P process.
7. Use basic six-sigma tools to reduce variability and scrap.
8. Reduce touch labor and materials through Design for Mfg. and Assembly

For a full description: www.hpmconsortium.com