HPM CONSORTIUM

The Weekly Update

"Leveraging learning for customer success" Making World Class Make Sense

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Important Dates to add to your calendar...

- ❑ **Sep 19th, SIG – 8:30 to Noon. IT Roundtable**. Host: Gerrie Electric, Burlington. Register with Nicole now at 519-893-6260 or by email at nsivyer@hpsinc.ca
- ❑ **Oct 11th, 12:00-3:30 HPM GMT Meeting.** Host: COM DEV Space, Cambridge
- ❑ **Oct 16-20th 2006 AME International Lean Conference** in Dallas – 1,584 now registered for the largest conference ever run by AME in 22 years. 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 – S**ee the diversity & harvest innovative ideas from each

HPM's "Diagnostic '07" Underway

The diagnostic process approved by the Board of Directors at their last meeting is now underway. Scott Smith, your new President, has been in touch with each member to establish both the date and the exact template to be used.

Scott and Bob Kerr have been executing a similar diagnostic over the past 5 years which has generated a base line that is proving to be of value to companies anxious about gaining a sense of their position vis a vis other companies - as well as a sense of progress along their own journey.

"The HPM diagnostic will focus on the consortium but with the expanded national diagnostic template serving as a useful sounding board"

The Choices

HPM is no stranger to diagnostics, with the first a multi-day one occurring some 15 years ago. It established measures that were easy to understand and each year were plotted to show the progress being made. ***This gave direction and guidance for just under a decade.***

In the late '90's members applied a very intense diagnostic provided by the National Association for Manufacturing Sciences in Ann Arbor Michigan – and while many members expressed satisfaction with the value they had received - the size of it was a deterrent for some members.

Simple Model & High Value

Scott will confirm with you whether you want the **one day** or the **two-day version** – the difference being the depth of the probe. **The value will be three-fold:**

1) To enable HPS/Scott to better understand member needs
2) To enable Members to better assess their position
3) To assist in planning the most effective programs

Here is a Jim Womack insight you will not want to miss…

Do you remember his hard hitting message in the January 9th issue of the Weekly update – where he took Bill Ford to task for his illogical public statement "We can compete with Toyota – but we can't compete with Japan?"

You heard Jim at the Kitchener conference and as a manufacturer – a very close look at Jim's words in the following message are merited – especially when we consider the thousands of jobs at stake… around a management issue that will affect many people.

The Lean Way Forward at Ford

Jim Womack – President & CEO – Lean Enterprise Institute
Keynote – CDN Regional Lean Mfg. Conference - Kitchener

Dear David,

I've been reflecting on today's remarkable headlines about the latest retreat by the Ford Motor Company as part of its "Way Forward" campaign. While reflecting, I have found it useful to think about the history of lean thinking at Ford, going back nearly 100 years. I believe it offers many useful lessons for our current-day lean journey and Ford's immediate choices.

The historical record is clear. Henry Ford was the world's first systematic lean thinker. His mind naturally focused on the value creation process rather than assets or organizations. And he was the first to see in his mind's eye the flow of value from start to finish, from concept to launch and from raw material to customer. In addition, Ford was history's most ferocious enemy of waste. (Except, possibly, Taiichi Ohno at Toyota who claimed that he learned what to do from reading Henry Ford's books.)

Ford relentlessly emphasized the need to analyze every step in every process to see if it created value before finding a way to do it better. Otherwise the step should be eliminated. (This was Ford's greatest criticism of Fredrick Taylor and Scientific Management. Why, asked Ford, was Taylor obsessed with getting people to work harder and more efficiently to do things that actually didn't need to be done if the work was organized in the right sequence and location?) Then, when the wasteful steps had been eliminated, it was time to put the rest in continuous flow.

By 1914 at his Highland Park plant Ford had located most of the manufacturing steps for his product – the Model T – in one building and had created very nearly continuous flow in many parts of the operation, using single-piece-flow fabrication cells for components in addition to the moving final assembly line. He had even devised a very primitive pull system by using "shortage chasers" on timed routes along the assembly line to check inventories at every assembly point and convey the information back to the fabrication areas. This speeded up upstream processes that had fallen behind and slowed down those that were getting ahead.

Equally remarkable, Ford had designed his Model T in only three months in one large room with a small group of engineers under his direct oversight. This surely was a high point in lean practice for decades to come.

Then it gradually fell apart. Ford's span of management control at Highland Park had been remarkably broad because he could easily take a walk to see the condition of every process, in design, assembly, and fabrication. And he could train a cohort of managers to see what he was seeing and remove more waste. No abstract measures of performance were needed.

However, as the company grew, Ford's personal management method became impractical. But what to replace it with? Ford himself seems not to have had an answer except to link every step by conveyors – as he attempted to do at the massive Rouge complex completed in the late 1920s. By the 1930s the whole Ford Motor Company was in a sense one linked process. (Ohno, of course, realized that lengthy conveyors governed by a central schedule are a push not a pull system, but this was much later.) Did this mean that in the founder's mind that the company needed only one manager -- Ford himself -- even as it became the world's largest industrial enterprise?

In any case, the system came crashing down in the 1930s as Ford tried to produce multiple products with multiple options in wildly gyrating markets. Only the staggering cash reserves from retained profits during the Model T era kept the company going until Henry Ford II was able to take over in 1945.

But what management system should he impose on the chaos? Henry Ford II read Peter Drucker's 1946 classic, *The Concept of the Corporation*, praising the General Motors management system and quickly remade Ford in the image of GM.

What a different system it was! Henry Ford had managed by going to the gemba to inspect the value creation process. General Motors executives managed by analyzing financial abstractions. For example, asset utilization (normalized for sales volume), days of inventory, cost of scrap, etc. in the factory. Available engineering hours utilized in product design. Managers were then rewarded for making numerical targets using methods developed by staff experts that managers rarely understood. A good way to make many of these numbers was to make products in large batches in order to achieve high asset utilization and low cost per individual step. The total value creation process from end to end -- which had been so clear to Henry Ford -- was gradually lost from view.

Soon Ford executives using the financial measures developed by finance czar J. Edward Lundy were even more rigorous in analyzing the performance of their area of control than GM executives. Robert McNamara and the Whiz Kids were the exemplars. And Ford did regain competitiveness as a GM clone, claiming a stable second place in the auto industry.

In addition, by the late 1940s Ford was one of three U.S. auto companies using the same management system in the same town with the same union. With high investment barriers to entry, a remarkable era of stability was put place, lasting nearly forty years until the transplant Japanese factories succeeded in the U.S. in the later 1980s.

When it suddenly became apparent at that point that the leading Japanese companies -- Toyota followed by Honda -- were using a different management system, it was very hard for Ford to respond.

In the late 1980s, as Dan Jones, Dan Roos, and I wrote *The Machine That Changed the World*, we were able to document that Ford had applied a number of lean techniques in its assembly operations and was making dramatic progress in manufacturing productivity. We took this to mean that at least one American company was applying lean principles and with good results.

What we couldn't report, because we had no way to measure it, was the status of the management system. And this was largely unchanged. Ford managers were still manipulating abstractions because the gemba consciousness of the early Ford Motor Company had been lost. Even worse, in the product development and supplier management processes, no change had occurred at all.

But Ford could still be successful in its home market for another 20 years by developing large pickups and SUVs. These were essentially America-only vehicles, suited to wide roads and low energy prices. They could only be challenged by Toyota and its Japanese emulators if they were willing to design vehicles specifically for the U.S. market and to locate production in North America.

In 1997 I got a call from Jac Nasser, who had just taken over Ford's North American Automotive Operations on his way to becoming CEO of Ford. He matter-of-factly told me that Ford's Explorer and F100 pickup series were the only Ford products that made serious money and that he calculated that he had four years to become as efficient and effective as Toyota. Otherwise, the large pickups and SUVs would be copied by foreign firms at lower cost with higher quality and Ford would be in terminal decline. "So," he asked, "how can Ford become Toyota in four years?"

We sat down to talk over just what this would mean -- dramatically changing the supplier management system, dramatically changing the product development system, dramatically changing the production management system, dramatically changing what managers do -- and he quickly concluded that it was just too hard. So he changed the management metrics, purged the poorest managers according to the metrics, and experimented with selling cars on the web! I was not asked back and had no desire to go back.

Ford actually survived for five years beyond Nasser's projected meltdown date – although Nasser didn't as CEO -- to arrive at its current crisis. But my prescription for new Ford CEO Alan Mulally is the same: Fundamentally rethink the supplier management system. Fundamentally rethink the product development system. And fundamentally rethink the production system from order to raw materials and from raw materials to delivery, with special attention to the information management system. (Much can still be learned from Ford's Mazda subsidiary, which became an able pupil of Toyota after a crisis in 1973.)

Above all, fundamentally rethink what mangers do and how they do it in order to regain the gemba consciousness that originally took Ford to world dominance. In brief, Ford needs to remake itself once more, this time in the image of the company that copied Ford's original system: Toyota.

In addition, finish rethinking the social contract as Ford becomes a normal company (not an oligopolist) in a normal town (where labor doesn't come from one supplier) that must live in a global market. Finally, rethink brand strategy to get rid of hopeless makes that can never make money – Mercury, Jaguar, Lincoln too? -- while refocusing the remaining brands on what customers really want -- sophisticated, hassle-free transportation in every price range. (A hint: Rethink the vast gap between the company and the customer to provide hassle-free mobility on a continuing basis to user-partners rather than selling cars to strangers in one-time transactions.)

Who knows whether this is doable in the time still available but it is the lean way forward. It will be tragic if the originator of lean thinking is crushed in the end by failing to learn lean lessons from its most earnest pupil.

Best regards,

Jim

Jim Womack

Chairman and CEOLean Enterprise Institute (LEI)

At Jim's request – feel free to forward this message to suppliers, customers, or colleagues who are implementing lean - or should be

For those going to the October AME Dallas Lean Conference… <u>A Heads up</u> – not yet released

A Hands-on Pit Crew Kaizen

Those going to the Dallas Conference Oct. 16-20th will hear shortly about the '**Pit Crew Kaizen'** to be held at the Texas Motor Speedway – a facility holding 280,000 people which makes it second only to Indianapolis in size. ***For a mere $75 USD – and a Conference Pass you:***

- Will attend a 1 hr intensive driver training session
- Will participate in the Pit Crew training in teams of 5
- Will have 3 tries to cut your Pit Crew cycle time
- Will compete against all the other teams present with the winner being provided a 'celebration'
- Will travel around the track with your team members
- Will have a 'gourmet lunch' at the speedway…

Now if you want to go all out… for another $190 extra you can:

- Be strapped into a 400 hp+ Race Ready Z06 Corvette with a professional race driver at your side… for 3 laps!