

**Volume 12, Issue 13**  **March 28, 2005****Important Dates to add to your calendar...**

- Apr 5<sup>th</sup>, AME The Effective Office...Making the Value Stream Visible.** Equipping professionals with the tools to see business process value streams & eliminate waste... **HPM Members get AME price.** Location: Host is CTS - #1 Tour Site at '03 AME Conf. **Must register through AME – [www.ame.org](http://www.ame.org)**
- Apr 12<sup>th</sup>, HPM Employee Leveraging Tour #10.** Host: Volvo Motor Graders, Goderich. **FULL**
- Apr 13<sup>th</sup>, HPM Open House.** Open to readers of the HPM Weekly Update who might consider membership in HPM. Host: Mancor, Oakville. **Call Dave**
- May 19: Value Stream Mapping Forum** – A Clinic for VSM in Non-Production Arenas... Re-scheduled from last fall. *Confirming presenter availability after Spring Break...*
- Apr 20<sup>th</sup>, 12:00-4 pm HPM GMT Meeting.** All HPM Directors or Alternates invited Host: GE Rep. & Insp.
- April 26<sup>th</sup>, HPM Employee Leveraging Tour #11.** Host: Avnet Electronics, Mississauga. **FULL**
- May 3<sup>rd</sup>, 9:30-2 pm, Innovation Insights: Celestica Plant Tour,** [www.celestica.com](http://www.celestica.com). To register for this event you must call: 1-800-999-4129. Lunch included [Cost \$150.]
- May 10<sup>th</sup>, HPM Employee Leveraging Tour #12.** Host: COM DEV, Cambridge, Nabeel Mirza **75% Full**
- May 18<sup>th</sup>, 11:30-5 pm, HPM Board Meeting.** Host: Canada Post
- May 24<sup>th</sup>, HPM Employee Leveraging Tour #13.** Host: Bird Packaging, Gary Whalen **58% Full**
- Jun 6-10<sup>th</sup>: "Implementing & Sustaining Lean Thinking Everywhere."** An AME Canadian Region & CME Western Division practical Lean Conference in Edmonton, Alberta. [www.measureupforsuccess.com](http://www.measureupforsuccess.com)
- Jun 14<sup>th</sup>, HPM Employee Leveraging Tour #14** Host: Samuel Strapping, Daniel Dstancescu. **42% Full**
- Jun 28<sup>th</sup>, HPM Employee Leveraging Tour #15** Host: Willow Manufacturing, Dennis Wild **67% Full**

**Next Employee Leveraging Tour with Dates****COM DEV Space ~ May 10th****"Practical Employee Learning Exchanges"**

Open to any HPM member company employee  
Monthly: 2<sup>nd</sup> & 4<sup>th</sup> week from 9-11 am.

**Each Tour site will show:**

- A) A 'Best Practice' they'd like to make even better
- B) An area where 'Suggestions are Welcome'

**To Register:** HPM'ers call Nicole at 519-893-6260 before **preceeding Friday** for security clearance with names. Others filling now – good to book before they are gone.

**Lexus Welcomes Gary Kerr & Mike Roether... Toyota Visit Superb**

Gary's annual pilgrimage to the Waterloo Region provided opportunities to 'reach the peak' this year with a first-hand look at the Lexus facility in Cambridge led by Toyota Canada's president, Ray Tanguay.

Today's increasingly bleak outlook on GM's rapid fade, it makes a visit to Toyota even more eye-opening. For this tour, Gary joined with our good friend, Mike Roether, author of "**Learning to See**" and with Michigan's Shingo Director, Richard Flemming, to 'learn together' as they saw first-hand what the world's leading automaker believes needs to be done to compete and win in 2005.

As one eases into the 3 million square foot Cambridge facility, the appreciation of how thinking and behaviour merges is brought home. For every one of the 4,300 employees who work there, it's a daily experience. When they enter the facility to work, they must pass through the opulence of the Lexus show room with its polished floors, its spotless models, and its superbly professional décor a more than subtle reminder of the job ahead for the day.

**The Reality**

There is good reason why Toyota folks themselves refer to what other people call "TPS or the Toyota Production System" - as the "**Thinking Production System.**" Gary cited example after example of the simple things he saw that together – add up to a big difference.

And once you see it, you begin to realize just why Lexus, Toyota, and Scion now hold 13% of the North American Market – while GM's 6 brands—Cadillac, Buick, Pontiac, Saturn, GMC, and Hummer—add up to only 10%... a mark that is continuing to fade even as GM incentives begin to approach \$4,000.

## The Tour

This was ordinary visitor tour – this one, put them directly in touch with the people in charge of the workstations and the Lexus assembly areas. And how could you not help make such contact when the facility president was your guide. **Here are some of the close observations Gary related:**

- Everyday in this World Class plant, about 1000 people will build 270 Lexus automobiles over two shifts – from 7:00 am to 4:45 (Plus overtime) and 5:45 pm to 2:30 am (Plus overtime) according to a 190 second takt time. This year, the entire facility – all models – will make over 300,000 of what many believe are the world's finest cars.
- The facility makes a car **ONLY when it is sold to a customer... and according to true FIFO discipline, only in the order purchased.** It is a true pull system driven completely by customer demand. So the next time you drive by a GM or Ford lot with hundreds of cars in view... think about the economics involved between these companies and Toyota, and whose mfg. costs might be lower.
- As you look down the moving Lexus assembly line you see a rainbow of colours. When Gary saw two blue cars separated by a black car, he could not help asking "Wouldn't there be even a little benefit in painting the two blue cars together?" The answer – NO, for two reasons. **Reason 1:** Cars come down the line in the sequence in which they were bought by customers, and **Reason 2** (which was awesome) was the paint process itself which was unlike anything Gary had ever seen. The paint for each car comes in a single can – that is all that is needed. As soon as the can is loaded, it begins to spin as it is released to the frame which is electrostatically charged to not allow even 1 drop to go astray. Once completed, there is no cleanup required and the next can begins to spin in preparation for its contribution to the awaiting unpainted frame.
- The preparation for painting is right out of that involved with a biological clean room. Human beings to work in the area must 'gown up' in anti-static materials and undergo an intensive air wash. And every frame before entering the paint area must also undergo an intense air wash... and there is more. So precise are the measurements that all particulate dislodged from the incoming frame is captured and measured against acceptable norms. The standard allows for no more than **4 grams of particulate** to be washed from the entire frame – and that includes all weld splatter and dust of any kind.
- **Environment:** What one notices in the Lexus facility is the copious amount of space – and its stark similarity to a pharmaceutical world with its stellar cleanliness. The welding areas are included, with each station fitted with high speed extraction units to suck away all smoke, splatter, and particulate.
- **Incredible Accuracy:** "Examples can be picked from any location you wish," according to Gary. Take the

basic chassis platform for example... the tolerance is set to +/- 1.5 mm anywhere on the chassis. Internal to the chassis all subassemblies are held to within +/- 1 mm on over 200 points if you are going to have the doors of a Lexus close as they do. The jigs to enable all this hold +/- 0.2 mm tolerances and are changed every week requiring only a 5 minute change over time! The jigs are changed Sunday to be ready for service on Monday for the week.

- **Global Status?** With all of the incredible work done by the employees you meet every day in Kitchener, Cambridge or throughout Waterloo County, they are now within 95% of the superb quality of the 'home of Lexus' facility in Kyushu Japan. And they are continuing to close the gap.
- **ARE YOU READY FOR THIS?... It has now been over four months since they have found a problem at final inspection – which includes 120 critical points.** This is a tremendous credit to all of the Lexus Team Members who take personal responsibility for looking out for problems as they check their own work and watch so closely for any errors in work that flows to them – or work that flows downstream from them. With such a strong team mind-set it is understandable that so few errors are found at final inspection.
- **Leadership Abounds – everywhere:** The approach to 'Respect for People – and Continuous Improvement' is legendary as is their public pronouncements confirming 'respect for the environment'. Many meetings are 'standup' – and the training is simple, yet all that is required to do the job. Days break out roughly into 4-2hr segments which may roughly include: A 5 minute standup meeting, a 15 minute break, a 2 hr work period, with a 30-minute break for lunch.
- **Handling Problems:** In working together with such precision, it is not surprising that problems that cannot be solved quickly must be escalated. Here's how it works: if a Team Member (employee) cannot solve a problem within 3 minutes he/she then hands it off (escalates it) to the team leader who has 9 minutes to find a solution. If that does not work it is handed off to the Group Leader who, if a solution cannot be found within 15 minutes, will propel it to engineering.
- **Supplier Responsibility:** The provision of parts to the assembly plant is via a 5-hour window – some 300 minutes. Some parts go directly line side – and others are staged in supermarkets. The relationship between suppliers to this company and other OEM's has been discussed in earlier Weekly Updates. One begins to see why suppliers want to provide their best work to OEM's such as this based on the respect they are afforded as well as the opportunity they have to become involved in a joint venture that draws international respect.
- **Culture & Continuous Improvement:** The respect for people built into the culture ensures they get the training they need to avoid any embarrassment. Only 20-25% of the workforce is contract, with the avenue to

full time employment being through a stint as a contract worker. All are treated with respect. CI is just part of life for everyone. When improvements are achieved that reduce the need for staff in a given area – the folks no longer needed are ‘Reinvested’ into other Kaizen teams. People feel valued, and they feel safe. As you walk throughout the facility, a commonality of dress provides uniformity. As Gary points out, “If you did not know who our tour guide was, you would have realized he was the facility president. Everyone wears the same dress.”

“What I thought particularly interesting was the stress put on the thinking that “Skills are provided through training – and Mindset is imparted through education.” Putting it all together makes it possible to understand why more than 100,000 suggestions were rendered last year.

“I came away with the belief that Toyota is a community unto itself – a community complete with its own hockey, baseball, and other teams plus a major fitness centre and more.” **But it all comes together with every aspect aligned & laser focused on the making of automobiles that are second to none - made by people who each believe they played a very real part in the achievement.** So many lessons!

## New From Dan Jones – Our Global Eye on Lean Gains

Dear David,

Flying to and from Australia gave me time to reflect on what appears to be **a significant increase in interest in lean**. Maybe, just maybe, we might be on the brink of a new era for the spread of lean.

In recent months we have been approached by a number of large companies about planning their lean transformations. However what is different this time is that the **impetus is coming right from the CEO**. In each case the new CEO has declared that one of their key corporate objectives is to deploy lean throughout their organization and across the world. It may not be a coincidence that GE recently declared their future was going to be Lean as well as Six Sigma. Where GE goes today many others will most likely follow.

This is good news for all those already struggling with lean in the trenches. For too long frustrated staff in operations, engineering, planning and logistics have wanted to do the right lean things, only to be frustrated by the lack of real interest or understanding from top management. Too often they have given up and sought a position in a more lean friendly environment elsewhere.

However, just as this top management commitment is welcome; it needs the right kind of response to bear fruit. **It is important to lead top management to an understanding that there is a lot more to lean than meets the eye.**

A good way to begin is by asking a series of key questions and opening up the discussion from there. Out of our recent discussions my colleagues Ian Glenday and Dave Brunt came up with five questions. You might try answering them yourself before asking them of your top management.

**1) Is the prime focus of lean in your company waste reduction?** Almost certainly the answer will be yes. This is a start, but by no means the end of lean.

The really big gains from lean come from fundamentally redesigning all the key value creating and support processes to enable the product to flow quickly through your organization to the customer. And to go through several redesign cycles as you learn to see the obstacles to flow.

**2) Do you ever change plans and schedules after they are issued?** Again most likely the answer is yes. The organization is still driven by a perceived need to be flexible and to optimize asset utilization by separately scheduling every activity. Paradoxically the ability to respond quickly comes from discovering how to eliminate unnecessary noise in the order signal and learning where you can create stable flow, while reserving some capacity for last minute demand. There is a stable core demand in every organization, if only you can see it and build upon it.

**3) Have you drawn current state maps but no future state maps?** Again the usual answer is yes. We recently observed that even seasoned Six Sigma black belts struggle in designing future state maps. They are more comfortable coming up with lists of topics for future projects than creating value streams that flow. But they also relish the challenge of learning how to build a value stream in which every step is interdependent and much more resilient to disruptions and backsliding.

**4) Is the prime focus of your performance measures on the results achieved?** Almost certainly yes. As you understand that current performance comes from the way key processes are designed and operated it will be necessary to track key measures of value stream performance in real time.

**5) Finally do you really know what key attributes the consumers of your products really value, and those they don't?** The answer is usually no. Many organisations sell to end customers through layers of distributors, who aggregate different kinds of orders and whose main task is to get rid of the products already made to forecast. Dig deeper and you will realize you have several different types of customer with very different demands.

**Cascading a lean process redesign activity throughout an organization starts with a dialogue around these kinds of questions.** It does not start by deploying lean tools or running a 5S program. It starts with hands-on training of a core group in lean system design. Their task is then to cascade this knowledge to every plant and office.

I wish you a Happy Easter. Yours sincerely  
Professor Daniel T Jones  
Chairman, Lean Enterprise Academy ~ [www.leanuk.org](http://www.leanuk.org)