

Lean Thoughts

Inspired People

Robust Processes

Lean Operations

June 07, 2004

For all **Consortium** events – Contact Richard for more information.. For other events – contact directly

Important Consortium Dates to add to your calendar

The **Team Time** schedule has been established for the coming year. Team Time will start at 1:00pm at the host company. This will allow for folks to work with peers in the host site to collaborate, facilitate and implement ideas to advance the implementation of manufacturing excellence. *Participants should be prepared to work on the shop floor and come equipped with proper PPE.* The host site will advise 1 week in advance Team Time Projects. Part of the Team Time activity will include a plant tour.

- June 10, Team Time, Stackpole CSD**, contact Gerry Ward, gerryw@stackpole.ca
- June 19, Community Splash Open House, Nestle Waters**, contact Mariela Castano, mcastano@perriergroup.com
- July 08, Team Time, Eaton Cutler-Hammer** contact Joe Fisher, JoeRFisher@eaton.com
- August 12, Team Time, Messier-Dowty**. contact Richard Evans, Richard.Evans@Messier-Dowty.on.ca
- September 09, Team Time, CGL Manufacturing** contact Dave Desker, daved@cglmfg.com
- September 25, Consortium ShareShowcase, Eaton Cutler-Hammer** contact Joe Fisher, JoeRFisher@eaton.com
- October 14, Team Time, CTS Corp.** contact Bob Garces., Bob.Garces@ac.ctscorp.com
- October 18-22, AME Annual Conference, Cincinnati**. contact www.ame.org for details
- November 06, Consortium ShareShowcase, Eaton Cutler-Hammer** contact Joe Fisher, JoeRFisher@eaton.com
- November 11, Team Time, Morrison Lamthe**. contact Tony Vita, tvita@morrisonlamthe.com
- December 09, Team Time, Inscape**. contact Joe Cyr, jcyr@inscapesolutions.com
- January 06, Team Time, Alumabrite Inc.**, contact Richard Kunst, Richard.Kunst@Kromet.com
- February 10, Team Time, Kromet International**. contact Richard Kunst, Richard.Kunst@Kromet.com

“Leaders must personally become a role model of what they want the culture to become; set the “tone;” and stay on key.”

Dr. Robert Hall ~ founder AME

Consortium Practitioner Circles

- o **Create Flow in a High Mix Low Volume Environment, Host; Messier-Dowty, Sept.01** contact Richard Evans, Richard.Evans@Messier-Dowty.on.ca

- o **Formal Problem Solving, Basic, Six Sigma and Jidoka, Host: Morrison Lamothe Sept.08** contact Mike Richards mrichards@morrisonlamothe.com
- o **Creating Cells and Flow Synchronization, Host Kraft, June 22** contact Hanif hjivrage@kraft.com
- o **Preventative Maintenance and TPM, Host Stackpole AGD, July 22** contact Cindy Grolleman cindyg@stackpole.on.ca
- o **Value Stream Mapping and Creating Actionable CI, Host Kromet, June 17** contact Todd.Jarrett@kromet.com
- o **Advance Part Quality Planning (APQP) or new part introduction Host, CFN Precision July 20,** contact Barry Wood bwood@cfn-inc.com
- o **Set-up Reduction host Stackpole CSD Aug. 19** contact Don Barber Don.Barber@stackpole.ca
- o **Creating the Visual Factory host, Eaton Cutler-Hammer, Sept 09** contact, Joe Fisher JoeRFisher@eaton.com
- o **Effective Health & Safety host Alumabrite date TBA** contact Bob Krosue Bob.Krouse@alumabrite.com
- o **5S+1 Implement, Enhance and Sustain host, Nestle Waters** contact Mariela Castano mcastano@perriergroup.com

More Feed-Back on Team Time

Cheryl Vanderpluym from Messier-Dowty recently attended the Team Time Session at Kraft. She has presented some excellent improvement suggestions for future Team Time Hosts to maximize the benefits. If a host site desires to change the day or start time of Team Time .. just drop me a quick e-mail .. Richard

What is working well:

- *the fact that it is a "working session" - hands on, share ideas, finish the "project" and have something to show for your afternoon.
- *participation by all consortium members
- *including workers from the target area (ie, maintenance workers X2 participated in Kraft Maintenance tracking board).
- Participation=ownership
- *1/2 day session - much more than that and participation may be hindered
- *sharing of photos

What needs to improve:

- *set agenda for each session well in advance so that proper resources at each site can be called/addressed/planned (didn't know that Kraft was planning to do "maintenance" issues until a few days before, then we scrambled to find appropriate participants). Because these are "working sessions" it is imperative that appropriate participants are there. Wouldn't serve any purpose to send someone from Finance Dept. to a Machine Shop workshop.....

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*Time of day - morning preferred please, particularly for those participants driving a distance away. (took me 2.5 hrs to get home from (Kraft)

*Day of week - Wed or Thurs preferred

*Suggested that something be set up on the internet (yahoo group? -

ie, Lean Gateway - call me) where participants can share ideas in "real-time" and a secure place to share photos with other consortium companies.

*Suggested to Mike Smith in phone call this morning that we consider using video technology more. Still photos are great, but video might be better. Suggest using video in a sequenced Powerpoint show, and running it as a loop presentation, throughout lunch time in the Hangar. you can have a look if you want, or not. Doesn't need to be "attended" or presented in any way, just looping presentation - sound would be great too.

Exposure to our folks:

* I love the idea of a working session focusing on specific areas or needs.

Let me know when/where the next one is. I'd like to consider going again. Lots of fun.

Cheryl Vanderpluym

A letter from Jim Womach

Dear Richard,

On my recent walks through companies, I've had an important realization. I had been assuming that in most companies the process steps in a typical value stream are sufficiently stable that it's practical to introduce flow, pull, and leveled production right away. By "stable" I mean that each process step is both "capable" (able to produce a good part every time it operates) and "available" (able to operate every time it is needed.) Operational availability (OA) is a good term for the combination of the two.

I've long known that at Toyota an assembly process would launch with operational availability of about 97% and strive to reach 100% through kaizen. And I've known that in even the most complex transfer lines, like engine block machining, Toyota achieves and maintains operational availability of 85% or more. That's striking evidence of stability.

But in typical operations I'm seeing recently I'm finding to my surprise that operational availability in cellular assembly (which is much less demanding than long car assembly tracks) is often no more than 90% even when there are no delays due to lack of materials. In complex machining operations OA is often below 60% and sometimes as low as 40%. And these are household name, global companies who claim to be well down the path to lean production!

With operational availability this low, trying to introduce continuous flow by linking steps and connecting areas of flow with pull systems is certain to be an exercise in frustration. The only way these systems can work at all is

with large buffers of work-in-process between each step and these inventories hinder further improvement by hiding problems. So I've been forced to conclude that a lot of us need to pay more attention to creating basic stability as we try to flow and pull.

(Let me hasten to add that this problem extends far beyond factory equipment. I recently made an appointment for a medical test and had to postpone it twice because the complex equipment wouldn't work. And does anyone know how to maintain jet-ways at airports? I find on my travels that jet-way problems delay the arrival and de-boarding on about one flight in twenty. And how can one of those simple moving walks in airports ever breakdown? But I seem to stumble onto at least one unmoving walkway on every trip. And why can't anyone keep our email server running? Poor operational availability is pervasive - and avoidable - in every aspect of our lives.)

Low operational availability traces to six types of problems:

- Downtime, when a process won't run at all (also termed major breakdowns or major stoppages).
- Changeover time, to convert from one product to the next.
- Minor stoppages, of just a few seconds.
- Cycle time fluctuation, when a process takes longer than planned.
- Scrap, meaning some production is lost.
- Rework, in which parts must be run through the process again, reducing the time available for new parts.

All of these are bad and all should be reduced. But be careful to avoid simple calculations of equipment utilization that confuse availability with uptime. The former is always good: Equipment must be able to run when you need it. The latter can be good or bad: High utilization (uptime) to overproduce items not needed is one of the worst forms of waste. And reducing time lost to changeovers by producing bigger batches rather than by reducing setup times is a big mistake as well.

The most important point is that these problems don't go away with a bit of random kaizen and they certainly don't go away if firms are only practicing breakdown maintenance without identifying trends and determining root causes. They also appear quickly in new equipment (sometimes bought because the old equipment won't run enough to meet demand) unless the equipment is very carefully designed from a maintainability standpoint and then systematically maintained.

The challenge is to create a rigorous maintenance process that involves everyone, gathers the appropriate data, discovers the root causes, and installs fixes so known problems don't recur, and new problems are anticipated (for example, from predictable wear during the equipment's life cycle).

With these measures in place, the lean goals of flow, pull, and leveled production are vastly easier to achieve. Even better, as basic stability is created, many firms will discover that they don't have capacity constraints. Indeed, they may find that they have too much capacity rather than too little.

**Best regards, Jim Womack, President and Founder
Lean Enterprise Institute, Inc.**