

Lean Enterprise Forum

September 2005 Highlights

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Get Ready, Set, Go!

by Tony Manos

I hope everyone had a glorious summer. As we head into the fall I just wanted to mention a couple of things that the Lean Enterprise Forum is up to. George Alukal and the body of knowledge team are forging ahead with creating our BoK. Please see George's article, "Defining a Lean Body of Knowledge," on p. 3. Once again LEF is co-sponsoring the Northern Illinois Quality Conference, November 6-8, 2005, in Naperville, IL. You can find information about the program by visiting www.asqchicago.com. The forum is still rapidly growing with more than 2800 members! Please take some time to visit the Web site at www.asq.org/le and participate in the discussion boards. Remember, we are here for you, so let us know what you think.



Tony Manos, Chair, Lean Enterprise Forum

Lean Enterprise Forum Tactical Plan FY 05-06

LEF Objectives

The Lean Enterprise Forum shall promote the principles and practices of cutting-edge manufacturing including "Lean Enterprise" by eliminating waste through the value stream, providing goods and services at the pull of the customer, and continually improving the system.

Operational Objectives

Make the Lean Enterprise Forum a customer-driven organization.

Activity	Desired outcome
Build the LEF Leadership Team	Recruit volunteer leaders who will work with the current chair, vice chair, and secretary in building products and services for LEF members, and will ensure the strength and continuity of the LEF.
Conduct regular teleconferences and meetings	Provide guidance to LEF officers and committee chairs regarding LEF's progress in reaching the 05-06 goals.
Participate in the World Conference in Milwaukee	Create opportunities for interaction with LEF members by conducting annual meeting, exhibit halls booth, session(s).



Samples From the Lean Discussion Board

LEF members who don't regularly visit the Lean Enterprise Discussion Board are missing out. Two discussion board questions are reprinted below. For the answers, you can visit the board.

Topic: Typical Kaizen Events. Can someone provide information on the methodology used in setting up and conducting a typical Kaizen event over a period of 3 to 5 days? What I am interested in is what the steps taken might be, including the Who, What, Where, When, and How.

Topic: Value Streaming Constraints. My question to the forum contributors is "Is it a good idea to place constraints on the VSM effort or should it be completely wide open?"

Here's how to link to the discussion board:

Go to www.asq.org/le

1. Enter Discussion Boards through the link on the left-hand column.
2. Click on Lean Enterprise Discussion Board.
3. Sign on using your ASQ user name and password—your user name is your membership number. Call ASQ 800-248-1946 if you need help signing on.
4. Review the directions and features on the front page.
5. Sign on to watch this discussion board.
 - a. Click on Watch Discussion Board; it is right next to the binoculars icon.
 - b. Click on Watch Options and enter a check into E-mail Updates.

You are now set to receive an e-mail message every time an entry is made in the Lean Enterprise Discussion Board—participate and enjoy!

Keihin Carolina System Technology in Tarboro Uses Lean to Save More Than \$200,000 Annually

Keihin Carolina System Technology in Tarboro, NC, will save more than \$200,000 annually by implementing a lean manufacturing tool called "single minute exchange of dies" (SMED). The savings—a conservative estimate according to Chris Eckhardt, Keihin manufacturing manager—resulted from increased productivity in the company's surface mount department (SMT) achieved during a setup reduction activity known as a kaizen, an activity that was duplicated in all SMT lines. Eckhardt credited much of their success to the guidance of lean manufacturing specialist John Schmitzer with the Industrial Extension Service (IES) of North Carolina State University.

Keihin manufactures engine control units (ECUs) and other products for Honda cars, trucks, and motorcycles. Their immaculate Tarboro facility covers 147,000 square feet, and nearly 500 employees work there in three shifts. The ECUs manufactured there are basically computers that control all the electronics in the vehicles, and Keihin manufactures these for all domestically assembled Hondas and Acuras.

IES specialist Schmitzer worked with Keihin for most of 2004, assisting the company with various lean activities included in the IES Lean Leader series. In this SMED activity, he supported a five-member team of hourly associates over a two-day period as they implemented a setup reduction on one line. The team began by setting goals, which included reducing the changeover time by 50 percent, reducing waste, moving internal changeover processes to external processes, implementing lean visual tools, and standardizing the process.

The team started by verifying their current process, reviewing paperwork, and videotaping the changeover process. They documented that an average of one changeover per day meant a loss of 105 units, and established a goal of reducing their changeover time by 50 percent. Their first step reduced their changeover time by 20 percent. This was achieved by organizing and relocating feeders, adding visual tools, assuring feeder availability, and standardizing the process—a great start, but not enough.

The second countermeasure implemented was relocating the feeder rack in closer proximity to the machine and standardizing that procedure so that all associates performed the changeover in the same way. This second step saved an additional 20 percent.

Finally, the team realized that stencils were located too far away from the line, so they designed a stencil cart and stored it by the line. With the new standardized procedure, they now make sure the stencils are available before changeover begins, and stencils are cleaned prior to the actual changeover. Implementing this third countermeasure helped the team exceed their 50 percent reduction goal.

In fact, the team achieved a 54 percent reduction and all improvements were made according to the plan and on schedule.

"This was our first lean activity involving hourly associates and it's part of something we call the Global Keihin Circle," said Eckhardt. "We had one management staff member on the team for support only, to be sure the team got what they needed when they needed it. John also supported the team. He would help by giving the team leads but he wanted us to figure it out for ourselves so we would really learn it, and that approach was appreciated. John helped us in many ways during this activity, leading us to the need to move internal processes to external ones, showing us the value of standardizing, and looking at the videotapes with us. He asked a lot of questions and saw things we had missed, helping us identify non-value-added activities."

cont. on p. 3

Keihin Carolina System Technology *cont. from p. 2*

This lean activity was so successful that the five-member team was selected to represent the Tarboro facility in the annual Global Keihin Circle competition—a competition among the corporation’s 25 manufacturing plants worldwide. The competition focuses on projects that help associates improve productivity, quality, and waste reduction in their plants. The entire team traveled to Kakuda City, Japan, to present the results of this activity to corporate headquarters.

Keihin has also established a lean network with all three of its U.S. plants and is sharing results and activities at quarterly meetings.

2004 was year one of a three-year plan for lean transformation. Keihin selected IES to work with them after staff members attended an IES lean overview session in Raleigh as well as a three-day IES lean session in Asheville. “Initially we looked at the IES Web site trying to find someone to help us with lean,” said Eckhardt. “After attending the lean overview, we realized their approach was informative but not pushy.”

These initial classes led Keihin management to partner with IES for a Lean Leader series, a series of 10 lean activities, with time in between each activity so that the company [staff] can practice what they have learned in the classroom setting. Keihin also received additional time for on-site consultation and mentoring.

“The time between sessions gives us the opportunity to put into practice what we learned in a classroom setting,” said Eckhardt. “You have to be willing to *just do it* and stop talking about it! If you look at manufacturing in North Carolina, it is rare to hear good news. It seems all you hear about are plant closings and layoffs, and lean manufacturing can give a competitive edge that is needed for survival in today’s global market.”

Schmitzer supports the lean activities by providing guidance and being on site during the events, and he also occasionally walks the plant, pointing out opportunities for improvement. “John demonstrates great flexibility and gives good feedback,” said Eckhardt. “I consider him our partner. I also know when he comes in, we get something accomplished.”

Eckhardt says this first year working with lean processes has been intentionally slow because the company is moving toward a cultural change and wants the proper systems in place. In 2005, Keihin will develop the Keihin Production System, and they plan to challenge for the NC Shingo Prize, which recognizes excellence in lean manufacturing. Keihin’s work with IES will continue as they partner to find more ways to reduce waste and improve productivity throughout the plant.

IES manufacturing extension specialist David Harrawood has worked with Keihin for some time now, and is impressed with the company’s commitment. “Keihin is a great company to work with,” he said. “They are enthusiastic about embracing many different processes and procedures, and we’ve worked with them on several different projects in addition to implementing lean manufacturing. They are determined to continuously improve productivity, and they are a smart, formidable competition.”

This article first appeared in the NCSU IES e-newsletter Vol. 1 Issue 1.

North Carolina State University's IES is a not-for-profit institution, created to serve and assist small- to medium-sized organizations to grow and prosper. Celebrating 50 years of service, IES is partnered with business and industry to cut costs, reduce waste, increase production, increase profits, and save jobs!

It has been reprinted with the permission of Dan Lucas and Jane Albright, IES director of communication.

Defining a Lean Body of Knowledge

by George Alukal

There is good interest among the Lean Enterprise Forum membership in helping to create a Lean Body of Knowledge. So far 14 members have volunteered, including members from Malaysia and Canada. Our focus now is on reaching agreement on the main topics of the Lean BOK. The following list is what we have come up with.

Lean Body of Knowledge Main Topics

- 1 Definition of lean
- 2 The eight wastes of lean
- 3 Evolution of lean—Ford, Taylor, industrial engineering to Ohno, Shingo, Womack
- 4 Core concepts of lean
- 5 The building blocks of lean
 - Value stream mapping
 - 5S
 - Visual controls
 - Standard work
 - Layout
 - Point of use storage
 - Batch size reduction
 - Quick changeover
 - Autonomation
 - Self-inspection
 - Poka-yoke
 - Pull/Kanban systems
 - Cellular/Flow
 - JIT
 - Total productive maintenance
 - Kaizen
 - Change management
 - Teams in lean
- 6 Lean and TQM, quality standards (ISO 9001, TS 16949, etc.), Six Sigma
- 7 Lean metrics
- 8 Lean accounting
- 9 How to start and sustain the lean journey
- 10 Keys to successful lean implementation
- 11 Lean enterprise

If anybody feels strongly that other topics should be added, please give it consideration and please respond with your reasons why.

George Alukal is a Lean Enterprise Forum past chair and this year's LEF Body of Knowledge team leader; he can be reached at: galukal@cmcusa.org.



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Lean Enterprise Forum Tactical Plan FY 05-06

cont. from p. 1

Products and Services Objectives

Develop, provide, and continually improve products and services.

Activity	Desired outcome
Make the LEF Web site a valuable tool	Modify and contribute to the existing Web site design to serve the needs of the members.
Publish Newsletter	Send LEF members regular updates about LEF activities and articles of interest to LEF members.
Investigate a Lean Certification	Determine the need and feasibility for LEF and ASQ to offer a Lean certification exam.
Define a Lean BoK	Create a listing of all topics included in a Lean body of knowledge.
Conduct Lean webinars	1/2 to 1 hour webinar course stored on LEF Web site.

Note From the Editor



I hope this newsletter finds all of you well. Please allow me to introduce myself. My name is Wendy Gomez and I reside in Southern California. While I am fairly new to “Lean principles”

I do have about six years’ experience in the manufacturing field. When a new director of manufacturing started at the company I work for, he introduced lean principles, as well as encouraged me to get involved with ASQ. Which brings me to where I am at now. As Tony Manos stated earlier, we are here for you. This is your newsletter so I encourage all of you to communicate what you would like to see in this newsletter. Perhaps you’ve read an interesting book on lean, or you’d just like to share a lean experience that you’ve had or participated in. Considering how quickly this forum is growing, I’m sure we all could learn from each other.

Regards,

Wendy Gomez

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