

AMIG

ADVANCED MANUFACTURING INTEREST GROUP

AQC – Toronto
May 24th
through May
26th:

- Implementing and Sustaining Lean Systems 5/24 11:45 – 1:00 at AQC.
- Value stream mapping May 25th 9:45-11:00 at AQC.
- Visit the AMIG Booth

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Message from the Chair

Greetings, everyone!

Thanks to Tim Knight, we had an on-going discussion and sharing of ideas regarding Lean over the last three or four months. Hope it was useful. If you have any topics to post for general discussion or ask a question, please contact Tim. We will have a booth at the AQC in Toronto in May; please volunteer to staff it for a few hours if you are attending the AQC; the dates are May 23 Sunday night to set up the booth), 24, 25 and 26.

AMIG will have our

Business Meeting on Monday, May 24 from 6 PM to 7 PM. Please plan on attending if you are going to Toronto for the Conference.

As some of you know, ASQ is planning to move to "forums", rather than divisions. Things will be clearer by May and we can discuss the changes at the Business meeting.

Also, AMIG has one presentation scheduled at the AQC: "Value Stream Mapping" by our incoming Chair, Tony Manos. On Tuesday May 25, there is a

lunch information meeting on Lean topics, facilitated by Dennis Burke. Watch out for the locations in your AQC brochure when it comes out soon. Hope to see as many of the AMIG members as possible in Toronto.

AMIG Listserv News

"The learning and knowledge that we have, is, at the most, but little compared with that of which we are ignorant." - Plato
Those words of wisdom, spoken from the past embody the goal for which AMIG listserv strives: expanding our readers' knowledge of lean.

With that goal in mind, past postings have included the organizational structures for lean, specific tool usage such as value stream mapping, and the need for lean certification. But the potential list of subjects is much larger, as AMIG

objective 1.9 states: Building blocks of a lean organization including change management, value stream mapping, workplace organization, visual systems, plant layout, and quality at the source, batch size reduction, teams, quick changeover, and point of use storage, total productive maintenance, cellular flow, pull/kanban, and continuous improvement.

By looking at this list, we can easily see that we have much left to cover.

You can help by posting a topic for discussion. Pick one that has meaning for you and offer it to the membership for review. Perhaps it will help others overcome the same problem or it might solicit an insight you never considered. Whatever the outcome, share your experience. We all have much more to learn. Please send your posts to: AMIG@listser.asq.org.
Best Regards,
Tim Knight,
Comoderator

Value Stream Mapping and Annual Business Planning

We are pulled like taffy into a hundred different directions to try and get projects done. Lately I've noticed a phenomenon related to current projects vying for resources and projects determined during a Value Stream Mapping session. I meet with companies that hear about Value Stream Mapping and want to learn the tool. When we complete their Current State Map, Future State Map and their plan to get there, the fun begins. They already have several projects to work on from their previous annual planning. Now, we are trying to add more projects onto their already monstrous workload. We have to determine which projects to spend resources on (time, people, and budgets). Here are the steps to identify projects when conflicts occur between current projects and new projects from a VSM:

1. Review your current projects based on your business plan
2. Compare your current projects against the projects established from your VSM
3. Determine priorities based on your goals or objectives
4. Realign efforts as needed
5. Use VSM for next year's annual business plan

"When we complete their current State Map, Future State Map and their plan to get there, the fun starts."

I recommend that before organizations start their annual business planning process that they use Value Stream Mapping as a tool to determine the projects that are the most critical for the Value Stream for a particular product family. Use the Plan generated from the Future State as an input to your business planning process. By using this method the most important endeavors for the Value Stream will be focused on.

If you aren't sure how to perform Value Stream Mapping, get someone with hands-on experience to show you. You can read books about it, but having an expert walk you through it is the best way I know to develop the Product Family, Current State Map, Future State Map and the Plan. If you can't make it to a learning session, the American Society for Quality has an internet based "Webinar" that will help out. Contact ASQ for more information at www.asq.org.

Remember, Value Stream Mapping is the tool to keep your Lean business efforts on the right track.

Let me know what you think, contact me at leanletters@profero.com.

Tony Manos
Catalyst
Profero, Inc.

Lean Speakers Needed

The Advanced Manufacturing Interest Group (AMIG) is developing a list of potential speakers that can be made available to sections, divisions, and other organizations that are looking for speakers in AMIG's areas of interest.

If you are interested in being a speaker, please provide the following information to Peggy Bowling at p.bowling@comcast.net:

- Your bio
- A list of the topics about which you would like to speak
- Abstracts for the topics indicated
- Compensation requirements, if applicable (i.e., honorarium and travel costs.)

A Balanced Quality System (Pt. 11)

How do we instill the culture of Kaizen into the hearts of all our employees? What skills will they need to begin the long road ahead? It would be nice if we could explain our objectives and walk away knowing that everyone is now on board 100% but that is not reality! To succeed, we must make this system part of everyone and we must make everyone part of the system. The 5-S's, a standardized problem solving methodology, a sound system for documenting the process, and good communication tools are the foundations of a balanced business process.

- **The 5S's**

The 5S's are the first step towards incorporating the kaizen philosophy into the hearts of all employees. Serious Japanese companies, such as Toyota, Sony, Furukawa, and others, all begin their training with the 5S's. Most American companies confuse the 5S's with a clean-up project and fail to reap the true benefits that 5S has to offer.

Each of the 5S's has an action that is associated with part of the kaizen philosophy. By performing the tasks and understanding why it is done, we are creating habits that help to mold the employee into a kaizen based unit! By cleaning, organizing, and standardizing employees are transformed in the very ways their plant is transformed. They become cleaner, more organized, and focused on improving the status quo. The 5S's are five Japanese words which taken together constitute Kaizen:

- **Seiri**, which means to Clear out, is the process of clearing away all of the things that are not useful. Items (*habits*) that are not useful or never used are removed from the plant. Those rarely used are kept off the floor but safe in another location. Tools and equipment used weekly or semi-often (the teams will decide) are kept nearby but out of the way, leaving only those things that are needed regularly nearby. This removes clutter, creates space, and organizes the workplace logically so that movements are reduced and any abnormality is easier to discover.

Ed. Note: This is the second of two parts. Part 1 was published in the last newsletter (it may be found in the AMIG section of ASQ.org). I would be happy to send a copy and can be contacted at rfisher@smurfit.com

A Balanced Quality System (Pt. 11)

- **Seiton**, which means to organize, is a process of organizing what is on the shop floor so that tools and equipment have a place. “Everything has a place and everything in its place.” Seiton teaches the value of organization, which is very important when solving process problems, and by having an organized workplace; time, energy, and money are saved.
- **Seiso**, which means cleaning, is a process of daily cleaning designed to incorporate the man and machine into one unit! Every employee is given an area in his department to maintain and spends no more than 10-12 minutes daily cleaning that area. The focus goes beyond mere cleaning for housekeeping’s sake (which, in itself, builds pride and a positive attitude) but gives the employee time to focus on his equipment as a nurse would focus on a patient. By cleaning daily, the employee will notice subtle changes in the equipment and area. This is the first step towards Total Productive Maintenance whereby equipment breakdowns are eliminated as problems are noticed, recorded, and fixed before the equipment causes process problems.
- **Seiketsu**, which means standardization, works with the other 4S’s. As equipment is organized, areas cleaned and cleared, the employees standardize equipment locations, tool setups, cleaning and checking methods. This reinforces the standard process concepts and allows the employees to see in a clear way the advantages of a clean, neat, organized, and standardized workplace. As they begin to problem solve, employees will need to incorporate these lessons into their improvement activities.
- **Shitsuke** is the process of improving the worker himself. Just as the process is continually improved, so must the worker evolve. In learning the lessons of the first 4S’s, the employees will become conscious of the Kaizen philosophy. Shitsuke is the process of applying this philosophy to the people themselves. Education, training, increased responsibilities, engineering courses, ESL, and problem-solving teams are a few of the ways to develop human resources. Not only must the process improve each day, but so must the employees!

“Each of the 5S’s has an action that is associated with part of the kaizen philosophy.”

PROCESS DOCUMENTATION

Processes must be documented so that any employee can perform a task by following the standard operating procedures and work instructions. It is vital that work instructions are either written by those performing the task or that they are approved by those performing the task. Work instructions should reflect what actually is being done, as opposed to documenting the “perfect procedure.” Checklists, which support work instructions, must be clear and easy to follow. The language must reflect the skill and reading levels of those doing the work. ISO documentation should not be written for the sake of the auditors but for those on the floor doing the work. Documentation should reflect the Kaizen philosophy in that it is continually updated as processes are improved and should serve as a means to improve the processes it documents.

“This is the first step towards Total productive maintenance.”

PROBLEM SOLVING

A systematic approach to problem solving consistent throughout the organization is necessary for the Kaizen philosophy to take root in the improvement process. A problem should be solved or a process should be improved by performing the following:

1. Document the problem – what, where, who, when, and customer effects must be documented. Write a problem statement.
 2. Quantify the problem - statistical analysis using SPC tools to verify perceived problem.
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A Balanced Quality System (Pt. 11)

3. Document current process – how do we perform the function now? Include work steps, departmental, customer, and supplier interactions, checkpoints, test points, data entry points, etc.
4. Implement temporary corrective actions and containment measures.
5. Determine the cause or causes of the problem – use the 5 Why's, data, team techniques (such as brainstorming, catch ball, CEDAC, etc).
6. Plan (permanent corrective actions).
7. Do (implement corrective actions).
8. Check (measure effectiveness of corrective actions).
9. Act (establish procedures to document corrective action).

Understand that, in many cases, step eight will lead back to step three as measurements will prove that the problem still exists, even if it has been reduced in magnitude

COMMUNICATION

Information is strength! The entire Balanced Process System is based upon good, efficient communication of all matters pertaining to the needs of the customer – not only external, but internal customers (those downstream in the operation) as well. Good communication is not merely having meetings to discuss problems. It is the constant feedback on performance compared to goals. Communication meetings, memos, charts and graphs, benchmark examples, closed circuit television programming, and one on one conversations are all important but not enough. Actions speak louder than words, so what we do and what we focus upon is as important as what we say and write. The Kaizen philosophy must be worn on our hearts and on our sleeves so that everyone can see its importance. All that we do, not just what we say, derives employees' perceptions of what is important!

The 5S's, systematic problem solving, process documentation, and good communication applied to the 6M's on a daily basis under a Kaizen philosophy will enable an organization to balance its processes, improve its performance, and uplift its customers. But it will take "patient persistence" to incorporate this into our way of life. The companies that have succeeded with Toyota production models have done so over several years time. Most American companies look for a quick fix, a short program designed to give immediate, dramatic results, but in their haste, they fail to lay the groundwork necessary to sustain the improvements. As time goes by, the programs are replaced, or fade away due to a lack of interest (and patience) only to be replaced by a new program. All this succeeds in doing is to train the employees to avoid each new program because they know that by waiting it out, it will pass. This must not be so with the balanced process system. Kaizen is a long-term philosophy that, if given time and effort, will slowly transform your corporate culture into a successful, continuously improving, and customer-satisfying success.

There are many tools that are useful in performing the 5S's, solving problems, documenting processes, and effectively communicating the customer needs to all employees. Some of them are:

- Statistical Process Control
- SMED (Single Minute Exchange of Dies)
- Benchmarking
- Brainstorming
- Pareto Charts
- Flow Charting (Process Mapping)

"The language must reflect the skill and reading levels of those doing the work."

AMIG

**Advanced
Manufacturing
Interest
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We're on the Web!

See us at:

WWW.asgamiq.org

A Balanced Quality System (Pt. 11)

Just In Time
KanBan
Poka-Yoke (fool proofing)
The 5 Why's
TPM (Total Productive Maintenance)
Visual Management

These tools must be available to all employees so that they may work together to solve problems and improve processes.

TEAMWORK

The bottom line to the entire system is **TEAMWORK**. The kaizen philosophy is based upon the organization coming together as one cohesive team with the common purpose of pleasing and strengthening their customers. The system encourages all employees to challenge the status quo but in a productive manner and positive spirit. Many American companies have made the mistake of importing the Toyota system without considering the differences in cultures. Japanese society places the group ahead of the individual. From their earliest days, children are taught to subjugate themselves to the good of the group while Americans are taught to be independent individualists, placing themselves ahead of the team in order to "get ahead." A Japanese worker rarely, if ever, questions an order and considers it his honor to get it done. If a Japanese worker questioned a decision, it would cause the one questioned to "lose face," something the Japanese go to extreme lengths to avoid. Americans need to know why a decision is made and will challenge an order if it seems inconsistent with their perception of the company's direction. In implementing this system, we must be aware of these cultural differences. We must communicate better to the American worker; we must acknowledge individual accomplishments within the framework of the team; and we must promote the entrepreneurial spirit that gives American workers a distinct advantage over their worldwide counterparts.

Conclusion

Focus upon strengthening customers through a balanced process by using the fundamental tools of the 5S's, Problem Solving, Process Documentation, Communication, and Teamwork in an atmosphere steeped with the Kaizen spirit. It is a long road, but one that will build and continuously improve quality into every facet of your organization.

AMIG

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