

In this Issue:

How Six Sigma and lean principles can be integrated into an ISO 9001 based quality system

We want to thank our readers for the positive response received on our October Newsletter "Is Six Sigma a replacement for a quality management system?" Your agreement that Six Sigma and lean manufacturing techniques should not be used as stand alone improvement methodologies, and are not replacements for an effective ISO 9001 management system, validates Mr. Micklewright's article and the survey conducted.




This week I had the unique experience to hear and meet Mr. Masaaki Imai, Author of 'Kaizen', 'Gemba Kaizen', and founder of the Kaizen Institute. Mr. Imai is known around the world as the "Lean Guru" and the father of Continuous Improvement. In the early ninety's his Kaizen (1986 McGraw Hill) book and its techniques helped my company, a DoD Maintenance and Repair Depot, and me the quality manager implement systems that saved our organization operating costs, rework, and cycle time improvements, totaling \$6 million. Highlights from Mr. Imai's presentation:

- "Use your brain, or sweat it out "
- People in companies only do two things – add value or no value added tasks
- Continuous improvement is not enough, everyday improvement is needed – "Standardization"
- Toyota production system is the best in the world...Kaizen is the DNA of Toyota
- Continuous improvement is cheap, better use of existing sources, money not the answer
- If you want to buy more machines, add computers or people, you better do Kaizen first
- Housekeeping improves prime real estate.
- Do the 5S's (Sort – Systematize – Sweep – Standardize – Self-Discipline)
- Red wine and scotch whiskey are the only things making money in inventory
- "Gemba" (where real action occurs e.g., lab, shop floor) is not the managers desk
- Management should go to Gemba and ask why- find out real time information, not "fabricated data"
- Business has two things - things are under control or out of control
- The #1 challenge for management – If you're satisfied, no incentive for improvement.

How is lean part of an ISO 9001 quality system?

Building a lean operational system requires the development of a current state map (a map of the current manufacturing/service production system) and then proceeding toward a much more efficient future state map (a map of what your company flow will resemble after lean improvements are made), while achieving major cost, inventory and lead-time reductions. ISO 9001:2000 also requires the building of a current state map:

The organization shall 4.1 a) identify the processes needed for quality management system and their application throughout the organization and b) determine the sequence and interaction of these processes. With regard to the development and progression toward a more efficient state map, investigate the requirements of ISO 9004:2000 Guidelines for Performance Improvements. Some of its sections strongly imply the use of lean techniques to increase efficiency of the quality management system:

-  7.5.1 "Reducing waste, improving infrastructure, processing methods and process yield"
-  7.5.4 "Management should involve suppliers and partners in defining and implementing effective and efficient processes to protect purchased material"
-  8.2.1 "Management should recognize there are many sources of customer-related information, and should establish effective and efficient processes to collect, analyze, and use this information for improving the performance of the organization"

Many ISO 9001 registered companies have a difficult time proving to themselves and the registrar auditors that they perform preventive actions. And yet, Six Sigma and lean initiatives both result in a wealth of preventive actions. If we only would learn about them and made them a permanent part of our quality system, we would improve our ISO 9001 based quality management system.

The following steps can be taken to fully integrate Six Sigma and/or lean into a company's quality system:

1. When writing procedures and work instructions, develop forms to describe the specific methodologies "Standardization" your employees will use. For example, I am constantly amazed that when I audit corrective and preventive action there is not an example of a completed and accurate CAR form contributing to a perfect case scenario for others to learn from and emulate.
2. Update your corrective/preventive action procedure to make clear when the company's corrective and preventive action report will be used and Six Sigma and lean will be initiated. Define responsibilities and criteria within the procedure to identify which path to take.
3. Update the company's objectives and goals to include not just quality objectives, but also business process objectives (e.g., those that directly address future revenues and costs).
4. Update your management review procedure/process to include status updates of lean projects (which should occur at the conclusion of each major step in DMAIC).
5. Modify your internal audit procedure so your auditors are truly looking for opportunities to improve (are you doing process based auditing?) Use your audit procedure to determine if the controls put into place, as a result of DMAIC, are truly effective.

6. Modify your process sequences to greater specificity in the direction of a future state map.

Always remember and focus on the spirit and application of what your organizations needs are, whether its ISO 9001:2000, Six Sigma or Lean. If quality and customer satisfaction isn't increasing and lead times, inventories, waste and costs aren't decreasing, a certificate won't do anything for the company. Only when the end result is improvement, can we say we are successful.

You may have noticed that we have combined this issue for November and December 2004. We want to thank you all very much for your feedback and support of the first full year of our monthly newsletter (missed any? Go to www.sustainingedge.com and click on newsletter archive). As always, please let us know what you think. We encourage suggestions for content and improvement.

Happy Holidays to You All - Until Next Year

