SCC Inventory Consulting, LLC *e-Zine*

Op-Ex Perspectives on Lean Six Sigma

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Over the past decade Six Sigma concepts have made their way into virtually every profession ranging from manufacturing to the service sector, the medical field to government, educational institutions to research and development. In October of this year a new anthology book titled Driving Operational Excellence – Successful Lean Six Sigma Secrets To Improve The Bottom Line will hit the market, providing a compilation of case studies, experiences and insights from more than 20 authors spanning this range of professions and industries.

While Six Sigma initially focused on product quality its application to *process quality* is even more powerful. Six Sigma is defined as product or process quality in which fewer than 3.4 defects occur in every million opportunities. Contrast this with a 1% failure rate (a 99% good process) by considering some examples:

- Postal Service: Six Sigma quality equates to 7 lost pieces of mail per hour nationwide vs. 20,000 lost pieces for a 99% good process.
- Airline Safety: Six Sigma quality means *each year* 1 missed runway while landing, nationwide, vs. 2 missed runways *per day* for a 99% good process. Imagine watching the nightly news to hear of two airline disasters, or near-disasters, every day!
- Medical prescriptions: Six Sigma quality equals 68 incorrect prescriptions per year nationwide vs. 200,000 per year for a 99% good process.

Achieving Six Sigma process quality does not happen by accident. It is achieved through the application of a rigorous application of tools encompassed in the DMAIC methodology, a five part problem solving approach: Define, Measure, Analyze, Improve and Control.

In the Define phase, the problem is defined in terms of a "Y-statement" in which the output "Y" is a function of multiple inputs, called "Xs". The Measure phase seeks to quantify these X-inputs and Y-outputs in terms of control charts, establishing the basis for measuring improvements during and after the project. In the Analyze phase, the interactions between inputs and outputs are studied to determine if statistically-significant relationships can be identified. These findings carry forward into the Improve phase during which process improvements are developed and tested. Successful improvements are selected and implemented in the Control phase.

The aforementioned book delves deeply into the DMAIC methodology, as well as a host of other Six Sigma and Operations Excellence topics, with insights, experiences and lessons-learned which are certain to resonate with readers across the professional spectrum.

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