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Continuous Improvement: What is Lean Six Sigma All About?

The root of both Lean and Six Sigma continuous improvement methods reach back to the time when the greatest pressure for quality and speed were on manufacturing. Lean rose as a method for optimizing automotive manufacturing by streamlining work flow through the elimination of waste. Lean is centered around creating more value with less work. Six Sigma evolved as a quality initiative to eliminate the causes of defects or errors by reducing variation in processes in the semiconductor industry. Six sigma uses statistical methods and a team of "black belts and green belts" that are experts in these methods.

Ironically, Six Sigma and Lean have often been regarded as rival initiatives. Lean enthusiasts note that Six Sigma pays little attention to anything related to speed and flow, while Six Sigma supporters point out that Lean fails to address key concepts like customer needs and variation. Both sides are right. Yet, these arguments are more often used to advocate choosing one over the other, rather than to support the more logical conclusion to blend Lean and Six Sigma.

Lean Six Sigma for services is a business improvement methodology that maximizes shareholder value by achieving the fastest rate of improvement in customer satisfaction, cost, quality, process speed, and invested capital. The fusion of Lean and Six Sigma are required to achieve a balanced process to help an organization improve service quality, as defined by the customer within a set time limit. Accordingly, it is not surprising that the earliest adopters of Lean Six Sigma arose in the service support functions of manufacturing organizations such as GE Capital, Caterpillar Finance, and Lockheed Martin.

Comparison of Lean and Six Sigma

Lean:

- Focuses on maximizing process speed
- Analyzes process flow and delay times for each activity in a process
- Eliminates the root causes of "non-value added" activities and their cost
- Provides a means for quantifying and eliminating the cost of complexity

Six Sigma:

- Eliminates defects, as defined by customers, using statistical methods
- Identifies variability in manufacturing and removes the cause(s)
- Uses data driven decisions and quality tools for effective problem solving
- Provides a rigid cultural infrastructure effective in obtaining sustainable results
- Utilizes teams of experts to take control of problems and implement solutions

Institute of Certified Professional Managers
James Madison University, MSC 5504, Harrisonburg, Virginia 22807
Phone: 800-568-4120 Web: www.icpm.biz
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Challenges of Lean Six Sigma

Like any improvement initiative, there are some limitations to lean six sigma. One is the challenge of having quality data available from which to identify problems and formulate solutions. Another involves the prioritization of lean six sigma projects, which traditionally is based on subjective judgment. Yet another focuses on eliminating defects, as it is illogical to assume that all defects are created equal. And a final challenge lies with the level of expertise management and staff possess in analyzing processes, finding problems and implementing solutions.

Lean six sigma will be around as long as projects yield measurable bottom line results. When this ends, we will look for another improvement methodology to take its place.

Excerpts taken from the Army Knowledge Center; http://www.army.mil/ArmyBTKC/focus/cpi/tools3.htm and Improvement and Innovation.com; http://www.improvementandinnovation.com/features/articles/pros-and-cons-six-sigma-academic-perspective

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James Madison University, MSC 5504, Harrisonburg, Virginia 22807
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