

The Lean Six Sigma Evolution

How Lean Six Sigma Has Evolved Management

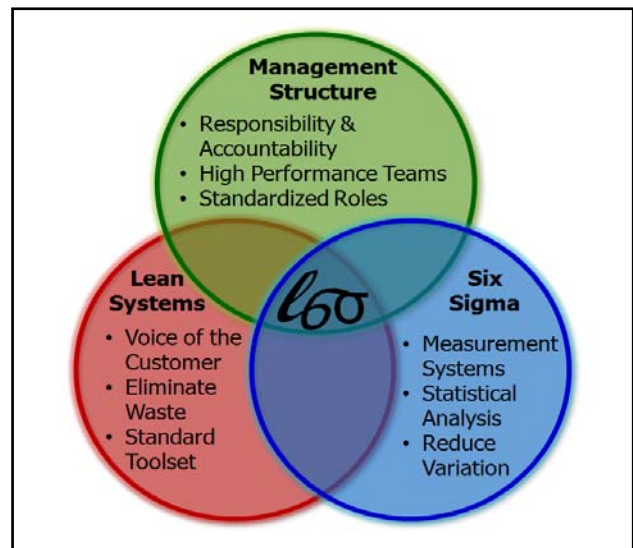
The most popular concept, or should I say concepts, in business management and improvement today are Lean Six Sigma. "Concepts" is the right term because Lean Six Sigma is not a single concept, but a compiled approach that incorporates several well-developed methodologies.

Lean comes from the Lean Manufacturing which was derived from the concepts of the Toyota Production System (TPS) and the Theory of Constraints. Lean is the production practice that considers the expenditure of resources for any purpose other than the creation of value for the end customer to be wasteful, and is thus a target for elimination. The concept says organize with the system in mind while providing the greatest value with the least amount of work. Today the principles of Lean include the Voice of the Customer (VOC), Value Stream Analysis, Process Mapping, Pull Production, and Continuous Process Improvement.

Six Sigma is a production strategy originally developed by Bill Smith at Motorola in 1986 to improve manufacturing processes and eliminate defects. Since then it has expanded to use the best Quality Management Practices of the Total Quality Management (TQM) era, with an emphasis on statistical methods and structured Leadership responsibility to create an infrastructure of processes, and experts, that comprise a defined sequence of steps for creating quality processes and products with the minimal variance from documented standards.

The name Six Sigma is derived from the Greek lowercase letter σ (called sigma) used to mean standard deviation (one point above and below the central point). Around the central point of the standard there are three upper levels and three lower levels. However, instead of calling it Three Sigma they applied the term Sigma to each of the six elements of deviation to come up with Six Sigma.

As you can imagine a variety of statistical control charts are a significant element of Six Sigma. Tools like SIPOC, Histograms, Pareto Analysis, Regression



Analysis, CTQ Tree, and Trend Charts are other staples.

Since the Lean and Six Sigma combined many similar tools for two production-type processes it was recognized that they could be easily combined into a single structure with Lean used in the Design and Define phases, up front element (Design with the end in mind), and Six Sigma as the means for continuous process improvement. Today Lean Six Sigma also includes the concepts of TRIZ, and the Balanced Scorecard Measurement Systems.

In many ways Lean Six Sigma is nothing new. Noted quality expert Joseph Juran called it "a basic version of quality improvement" saying it only included what they use to call "facilitators" [of quality]. Yet it has become the integration bed of the best management and quality practices developed and proven over the past 50 years of manufacturing and production learning, superimposed with a structure of trained change agents (black belts) and a well defined common language that often fills the voids created by the limited nature of the individual concepts themselves.

When fully employed and supported, Lean Six Sigma has the capability, and proven history, to create significant results for nearly any organization.