



What is the Difference?

Lean manufacturing is a culture, a way of thinking about your business and how you run the enterprise day in and day out. Specifically it is the elimination of waste in the broadest sense in every element of the day to day operation of a business. Six Sigma, on the other hand, is a specific set of tools or a methodology for solving problems to improve specific issues in your business.

Lean originated from the Toyota Production System. In my opinion, Lean concepts have been an evolution from ideas which have had many names over the years, with many of the concepts originating from Edward Deming's Total Quality Management System over 50 years ago.

The primary goal of a Lean organization is to understand and satisfy the customer's requirements the first time and every time. This must be done in a fashion that eliminates all activities (wastes) that do not add value to the customer. Waste can exist in all aspects of business and can be classified in the following categories: (1) Overproduction: producing more goods than the customer requires or producing them when the customer does not require them. This wastes capital and creates an opportunity cost. (2) Waiting: resources which have been idled, due to upstream activity not delivering on time. This is often associated with production activity, but can just as easily apply to any activity not delivering as promised. (3) Transportation: the unnecessary movement of materials from one operation to another. It can also apply to unnecessary travel to business meetings which can now be accomplished through video conferencing. (4) Additional Processing: extra operations due to defects, incorrect information or any additional handling of goods due to errors. (5) Inventory: any excess material whether finished goods, WIP or raw material, which is above current customer requirements. (6) Motion: causing equipment or employees to take extra steps due to poor or inefficient process layout. (7) Defects: products or services that do not conform to the customer's requirements or expectations, which can create additional costs and result in the loss of business and customers.

Whereas lean is a culture, Six Sigma is project based and has a specific set of process improvement tools. Six Sigma's goal is to eliminate variation and, as the name implies, drive process variation 6 standard deviations from the process mean, or no more than 3.4 defects per million opportunities. Process deviation creates errors, which in lean terms causes waste. This in turn allows Six Sigma methodologies to be powerful tools in a lean organization.

The adoption of Lean and/or Six Sigma philosophies takes a strong management commitment of time and resources. It is not a change one should take lightly because Lean truly is a cultural change, a different way of thinking that must be adopted and supported from the top down.