



TenStep Supplemental Paper

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The Basics of Six Sigma

Six Sigma refers to a philosophy, goal, or methodology used to reduce waste and improve the quality, cost, and time performance of any business. Sigma is a Greek letter used to indicate the amount of variation in a product. A performance level of Six Sigma is equal to 3.4 defects per million opportunities - not perfect, but pretty close. (A defect is defined as anything that causes customer dissatisfaction, or strays from accepted tolerances.) Unfortunately, many companies today are operating at the three sigma level, meaning they are experiencing about 67,000 defects per million opportunities.

Six Sigma quality can be achieved through an ongoing combination of structured and systematic projects. Projects are categorized as:

- Transactional Business Process Projects that extend across an organization
- Traditional Quality Improvement Projects that solve chronic problems that span multiple functions within an organization

A project that aims to achieve a Six Sigma level of quality should focus on the design of products, services, or processes. Six Sigma principles can be applied to many areas, including manufacturing, administrative, project work and customer service. Six Sigma techniques help lower variability, which reduces the number of defects and the operating costs while increasing effective capacity. Six Sigma techniques can also be used to improve other areas, such as customer loyalty, which also helps the company's bottom line.

Six Sigma Basics

Here are some basic terms that you may encounter when learning more about Six Sigma.

- **Six Sigma Leadership.** An executive briefing should be held to discuss the Six Sigma philosophy, tools, and techniques, as well as its implications. This provides participants with the knowledge to create a more high-quality and performance-oriented organization.
- **Six Sigma Champions.** Champions are senior management personnel who are faced with the challenge of encouraging the use of Six Sigma processes to achieve business and operational objectives. Champions also mentor and support Black Belts and their projects.
- **Six Sigma Green Belt Training.** An employee of an organization who participates in a Six Sigma team is referred to as a Green Belt. A Green Belt should receive some training in the Six Sigma practice to be more effective.
- **Six Sigma Black Belt Training.** A Black Belt is a manager or technical specialist who is completely responsible for implementing Six Sigma throughout the business unit. A few institutes offer Six Sigma Black Belt Training and Black Belt



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certification. To become a certified Black Belt, a candidate must successfully complete the improvement projects approved by the Institute Instructor.

- **Six Sigma Master Black Belt Training.** The Master Black Belt participant should undergo a series of teaching sessions and presentations where he or she will have to demonstrate the ability to effectively teach the Green and Black Belt programs. Master Black Belts are company-wide Six Sigma Quality experts.

Summary

Six Sigma is a philosophy that provides companies with a series of processes and statistical tools that lead to both increased profitability and quality - whether a company produces durable goods or services. Six Sigma is a long-term process that is intended to cause continuous improvement. These improvements cannot be accomplished by restructuring the company or spending a lot of money. Instead, Six Sigma quality requires perseverance, focus and dedication.