



SIX SIGMA

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Procedure and Implementation Process of SIX SIGMA

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HISTORY OF SIX SIGMA

Originally developed by Bill Smith at Motorola in 1986, the Six Sigma Training program was created using some of the most innovative quality improvement methods from the preceding six decades. The term "Six Sigma" is derived from a field of statistics known as process capability. The term 6 Sigma refers to the ability of manufacturing processes to produce a very high proportion of output within specification. Processes that operate with "six sigma quality" over the short term are assumed to produce long-term defect levels below 3.4 defects per million opportunities. Six Sigma's goal is to improve overall processes to that level of quality or better.

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LIST OF COMPANIES IN WHICH SIX SIGMA IS IMPLEMENTED

3M
DELL
HSBC
WIPRO
DuPont
Motorola
Vodafone
ICICI Bank
Whirlpool
Samsung Group
LG Group

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What is Six Sigma?

A collaboration of years of proven management strategies developed into one clear and concise management program with one goal in mind, to improve the outcome of any company, whether that be a company whose goal is to provide the best customer service or the best products, the process is the same and is very simple. The goal is to eliminate defects, anything that leads to customer dissatisfaction, and improve the manufacturing and/or business processes, leading to only a successful outcome.

The Six Sigma Training Program believes in three primary principles for creating success: Business success is highly reliant upon reducing the amount of variation that you have in your business process.

Manufacturing and business processes have characteristics that can be clearly measured, analyzed, controlled and improved upon.

Achieving sustained quality improvement is the result of the entire organization working together for a common goal, especially onboard need to be the members of top level management.

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How Does Six Sigma Work?

Six Sigma has both management components and technical components. Using this dual approach allows for everyone to have a role in making the Six Sigma plan a success.

The management side focuses on using the management system to line up the right projects and match them with the right individuals. Management also focuses on getting the right goals and process metrics to insure that projects are successfully completed and that these gains can be sustained over time.

The technical side focuses on enhancing process performance using process data, statistical thinking, and methods. This focused process improvement methodology has five key stages: Define, Measure, Analyze, Improve and Control.

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- Define is to define process improvement goals that are consistent with customer demands and company strategy.
- Next measure the key aspects of the current processes that your company is using and collect relevant data about these processes and current results.
- Then analyze the data to verify cause and affect relationships, be sure to consider all possible factors involved.
- Then improve or optimize the process based upon data analysis using techniques like Design of Experiments or observational study.
- The last step is to control to ensure that any deviations are corrected before they result in defects. During this step you will also set up pilot runs to establish process capability and will continuously monitor the process.
- All tools statistical or not are linked and sequenced in a unique way that makes 6 Sigma both easy and effective to use. The basic approach focuses on the identification of the key process drivers (variables that have the largest effect on output) and relies on software such as Minitab for statistical calculations.

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Is Six Sigma Certification Right for You and for Your Business?

The great thing about six sigma certification is that it is perfect for all businesses, whether you are a large corporation producing a product or a small business that specializes in customer service. Six Sigma Training will help your business improve productivity and increase the bottom line. 6 Sigma is a very flexible program that gets everyone working together towards one common goal and that is improving the quality of whatever you produce, thus improving your company's profitability.

The different levels of Six Sigma Certification give each and every employee the chance to contribute, which in essence allows everyone to be part of the solution to the businesses problems. This not only creates a feeling of team work and unity, but also allows each and every employee to realize they are valued by the company.

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How is Six Sigma Training Different from Other Business Management Programs?

Although a combination of several different ideas, Six Sigma Training is set apart from the rest. Primarily the things that set 6 Sigma apart include:

- Decisions that are based on verifiable data and not the result of assumptions and guesswork.

- A focus on attaining measurable and quantifiable financial returns from any Six Sigma project.

- A specific multi tiered infrastructure which creates a role for every person in the company to help implement the Six Sigma plan on their own level.

- An increased emphasis on strong and passionate leadership and support.

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STEPS IN SIX SIGMA PROCESS

- VOC – Voice of Customer.
- SIPOC – Supplier Input Process Output And Customer.
- DMAIC – Define Measure Analyze Improve and Control.
- DMADV / DFSS – Define Measure Analyze Design and Verify / Design For Six Sigma.

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- **Define** the Customer, their Critical to Quality (CTQ) issues, and the Core Business Process involved.
- Define who customers are, what their requirements are for products and services, and what their expectations are
- Define project boundaries - the stop and start of the process
- Define the process to be improved by mapping the process flow

Measure the performance of the Core Business Process involved.

- Develop a data collection plan for the process
- Collect data from many sources to determine types of defects and metrics
- Compare to customer survey results to determine shortfall

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- **Analyze** the data collected and process map to determine root causes of defects and opportunities for improvement.
- Identify gaps between current performance and goal performance
- Prioritize opportunities to improve
- Identify sources of variation

Improve the target process by designing creative solutions to fix and prevent problems.

- Create innovative solutions using technology and discipline
- Develop and deploy implementation plan

Control the improvements to keep the process on the new course.

- Prevent reverting back to the "old way"
- Require the development, documentation and implementation of an ongoing monitoring plan
- Institutionalize the improvements through the modification of systems and structures (staffing, training, incentives)

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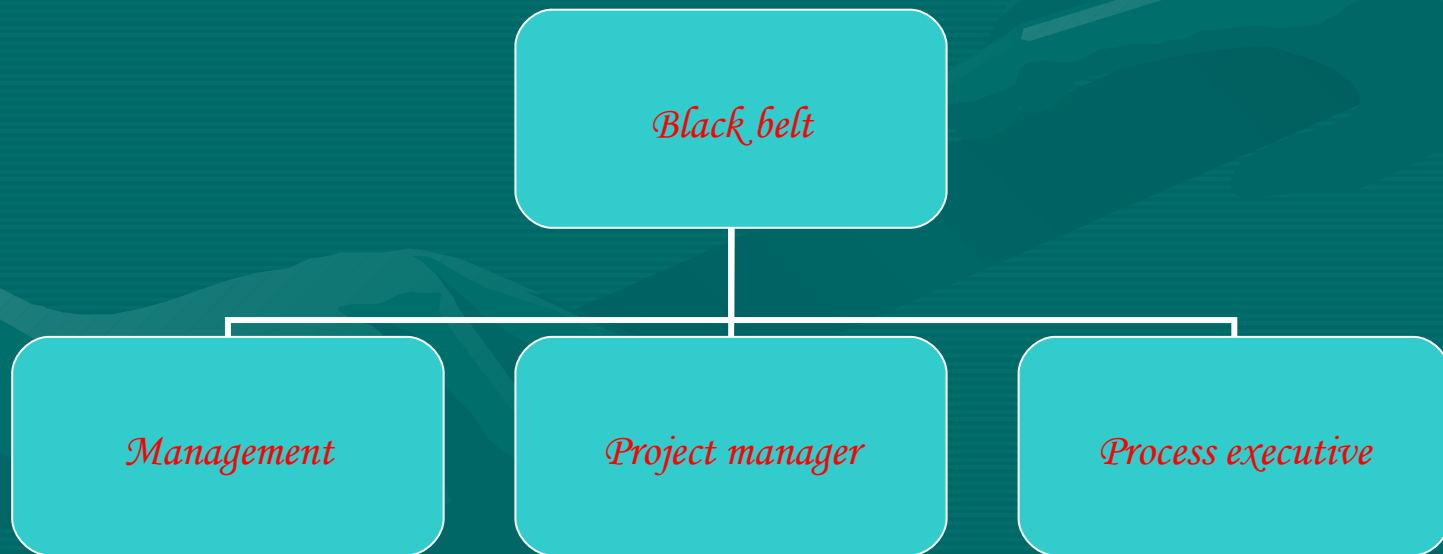
What Is Six Sigma?

Six Sigma is a rigorous and disciplined methodology that uses data and statistical analysis to measure and improve a company's operational performance by identifying and eliminating "defects" in manufacturing and service-related processes. Commonly defined as 3.4 defects per million opportunities, Six Sigma can be defined and understood at three distinct levels: metric, methodology and philosophy.

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Implementation of SIX SIGMA

- The Implementation takes 1 year to complete.
- The persons involved are



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Thanks & Regards
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