

SIX SIGMA - INTRODUCTION

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Six Sigma is a highly disciplined process that helps us focus on developing and delivering near-perfect products and services.

Features of Six Sigma

- Six Sigma's aim is to eliminate waste and inefficiency, thereby increasing customer satisfaction by delivering what the customer is expecting.
- Six Sigma follows a structured methodology, and has defined roles for the participants.
- Six Sigma is a data driven methodology, and requires accurate data collection for the processes being analyzed.
- Six Sigma is about putting results on Financial Statements.
- Six Sigma is a business-driven, multi-dimensional structured approach for:
 - Improving Processes
 - Lowering Defects
 - Reducing process variability
 - Reducing costs
 - Increasing customer satisfaction
 - Increased profits

The word *Sigma* is a statistical term that measures how far a given process deviates from perfection.

The central idea behind Six Sigma: If you can measure how many "defects" you have in a process, you can systematically figure out how to eliminate them and get as close to "zero defects" as possible and specifically it means a failure rate of 3.4 parts per million or 99.9997% perfect.

Key Concepts of Six Sigma

At its core, Six Sigma revolves around a few key concepts.

- **Critical to Quality** : Attributes most important to the customer.
- **Defect** : Failing to deliver what the customer wants.
- **Process Capability** : What your process can deliver.
- **Variation** : What the customer sees and feels.
- **Stable Operations** : Ensuring consistent, predictable processes to improve what the customer sees and feels.
- **Design for Six Sigma** : Designing to meet customer needs and process capability.

Our Customers Feel the Variance, Not the Mean. So Six Sigma focuses first on reducing process variation and then on improving the process capability.

Myths about Six Sigma

There are several myths and misunderstandings surrounding Six Sigma. Some of them few are given below:

- Six Sigma is only concerned with reducing defects.

- Six Sigma is a process for production or engineering.
- Six Sigma cannot be applied to engineering activities.
- Six Sigma uses difficult-to-understand statistics.
- Six Sigma is just training.

Benefits of Six Sigma

Six Sigma offers six major benefits that attract companies:

- Generates sustained success
- Sets a performance goal for everyone
- Enhances value to customers
- Accelerates the rate of improvement
- Promotes learning and cross-pollination
- Executes strategic change

Origin of Six Sigma

- Six Sigma originated at Motorola in the early 1980s, in response to achieving 10X reduction in product-failure levels in 5 years.
- Engineer Bill Smith invented Six Sigma, but died of a heart attack in the Motorola cafeteria in 1993, never knowing the scope of the craze and controversy he had touched off.
- Six Sigma is based on various quality management theories
 a. a. Deming's 14 point form management
 b. b. Juran's 10 step on achieving quality.

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