What is Six Sigma?

Six Sigma has evolved over the last two decades and so has its definition. Six Sigma has literal, conceptual, and practical definitions. At Motorola University, we think about Six Sigma at three different levels:

- As a metric
- As a methodology
- As a management system

Essentially, Six Sigma is all three at the same time.

Six Sigma as a Metric

The term "Sigma" is often used as a scale for levels of "goodness" or quality. Using this scale, "Six Sigma" equates to 3.4 defects per one million opportunities (DPMO). Therefore, Six Sigma started as a defect reduction effort in manufacturing and was then applied to other business processes for the same purpose.

Six Sigma as a Methodology

As Six Sigma has evolved, there has been less emphasis on the literal definition of 3.4 DPMO, or counting defects in products and processes. Six Sigma is a business improvement methodology that focuses an organization on:

- Understanding and managing customer requirements
- Aligning key business processes to achieve those requirements
- Utilizing rigorous data analysis to minimize variation in those processes
- Driving rapid and sustainable improvement to business processes

At the heart of the methodology is the DMAIC model for process improvement. DMAIC is commonly used by Six Sigma project teams and is an acronym for:

Define opportunity

Measure performance

Analyze opportunity

Improve performance

Control performance

Six Sigma Management System

Through experience, Motorola has learned that disciplined use of metrics and application of the methodology is still not enough to drive desired breakthrough improvements and results that are sustainable over time. For greatest impact, Motorola ensures that process metrics and structured methodology are applied to improvement opportunities that are directly linked to the organizational strategy.

When practiced as a management system, Six Sigma is a high performance system for executing business strategy. Six Sigma is a top-down solution to help organizations:

- Align their business strategy to critical improvement efforts
- Mobilize teams to attack high impact projects
- Accelerate improved business results
- Govern efforts to ensure improvements are sustained

The Six Sigma Management System drives clarity around the business strategy and the metrics that most reflect success with that strategy. It provides the framework to prioritize resources for projects that will improve the metrics, and it leverages leaders who will manage the efforts for rapid, sustainable, and improved business results.