SIX SIGMA

WHAT IS SIGMA?

A term(Greek) used in statistics to represent standard deviation from mean value, an indicator of the degree of variation in a set of a process. Sigma measures how far a given process deviates from perfection. Higher sigma capability, better performance.

WHAT IS SIX SIGMA?

- Six Sigma - A highly disciplined process that enables organizations deliver nearly *perfect products and services.*

- *The figure of six arrived statistically from current average maturity of most business enterprises*

- A philosophy and a goal: as perfect as practically possible.

- A methodology and a symbol of quality.

- A statistical concept that measures a process in terms of defects – at the six sigma level, there 3.4 defects per million opportunities.

Six Sigma is not:

- A standard
- A certification
- Another metric like percentage

    Rather!
- It is a Quality Philosophy and the way of improving performance by knowing where you are and where you could be.
- Methodology to measure and improve company's performance, practices and systems

WHY SIX SIGMA ?

Six Sigma emerged as a natural evolution in business to increase profit by eliminating defects. The Current business environment now demands and rewards innovation more than ever before due to:

- Customer Expectations
- Technological Change
- Global Competition
- Market Fragmentation

SIGMA LEVELS

Sigma Level (Process Capabil	Defects per Million Opportu
2	308,537
3	66,807
4	6,210
5	233
6	3.4

SIX SIGMA METHODOLOGY

- BPMS
    Business Process Management System

- DMAIC
    Six Sigma Improvement Methodology

- DMADV
    Creating new process which will perform at Six Sigma

BUSINESS PROCESS MANAGEMENT SYSTEM:

BPM strategies emphasize on process improvement and automation to derive performance Combining BPM strategies with sigma six is most powerful way to improve performance. Both strategies are not mutually exclusive but some companies produced dramatic results by combining them.

WHAT IS DMAIC?
(Define,Measure,Analyse,Improve.Control)

- A logical and structured approach to problem solving and process improvement.
- An iterative process (continuous improvement)
- A quality tool which focus on change management style.

Phases of Six Sigma are:

- Define specific goals to achieve outcomes, consistent with customers demand and business strategy
- Measure reduction of defects
- Analyze problems ,cause and effects must be considered
- Improve process on bases of measurements and analysis
- Control process to minimize defects

WHAT IS DMADV?

Acronym for:

- Define the project
- Measure the opportunity
- Analyze the process options
- Design the process
- Verify the performance

BENEFITS OF SIX SIGMA

- Generates sustained success
- Sets performance goal for everyone
- Enhances value for customers
- Accelerates rate of improvement
- Promotes learning across boundaries
- Executes strategic change

TOOLS & TECHNIQUES
- ✓ Check Sheets (collect data to make improvements)
- ✓ Pareto Charts(define problem and frequency)
- ✓ Cause and effect diagram (Identify possible causes to solve problem)
- ✓ Histogram (Bar charts of accumulated data to evaluate distribution of data)
- ✓ Scatter diagram (plots many data points and pattern between two variables)
- ✓ Flow Chart (Identify unwanted steps)
- ✓ Control charts (Control limits around mean value)