

ISL-Certified  
Six Sigma Champion  
Program

Dr.R.S.Chalapathi  
Master Black Belt

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## Evolution of Six Sigma Approach

- 1981: The 10X Goal
- 1985: the communications sector established a single metric quality, Total Defects per Unit (DPU).
- 1987: restated corporate goal to achieve six sigma performance by 1992.
- 1988: Became first to get MBNQA
- 1990: Six Sigma Research Institute

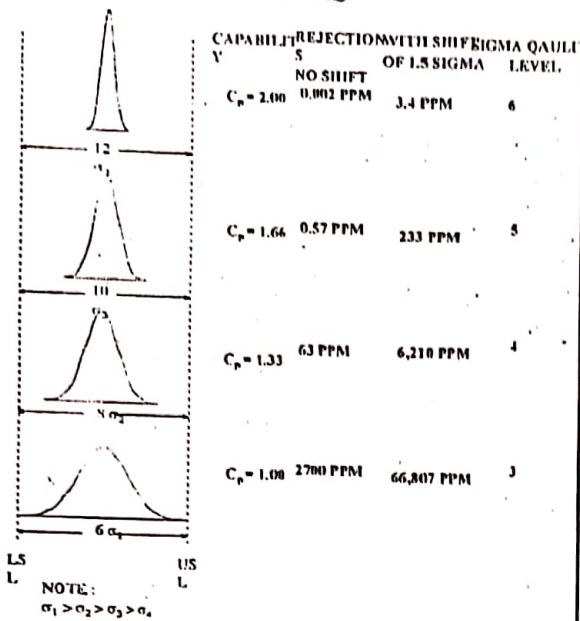
## Learning Objectives

- At the end of the training the Six Sigma Champion will be able to:
  - Make a six sigma roadmap for their organization.
  - Select Right Six Sigma projects.
  - Select Right people as Black Belts.
  - Conduct Structures project reviews.

## Six Sigma at GE

- *Define* phase added to the original 'MAIC' methodology.
- *Soft Skills* integrated with the Black Belt Body of Knowledge (BoK).
- Scope of the Six Sigma initiative has changed from 'manufacturing' to the entire business – Services, Product design and Innovation.
- Highly focused leadership.

## Process Performance Levels



## Six Sigma Philosophy

- Six Sigma is about the abatement of risk in everything a business does or delivers.
  - All defects or errors represent risk but not all forms of risk can be characterized in terms of defects.
- Six Sigma is a new science of doing business:
  - Six Sigma Problem Solving (DMAIC)
  - Design for Six Sigma (DFSS)
  - Managing for Six Sigma

## Achieving Six Sigma Quality

- To put it in simple terms the six sigma approach focuses on reducing variability and reaching excellence. This is achieved by working on the following four key strategies:
  - Process standardization.
  - Process Stability.
  - Capability Improvement.
  - Robust Design.

## What is Quality?

- | Traditional definition   | Six Sigma definition  |
|--|---|
| <ul style="list-style-type: none"> <li>• conformance to standards</li> </ul> | <ul style="list-style-type: none"> <li>• Quality is a state in which value entitlement is realized for the customer and provider in every aspect of the business relationship.</li> </ul> |

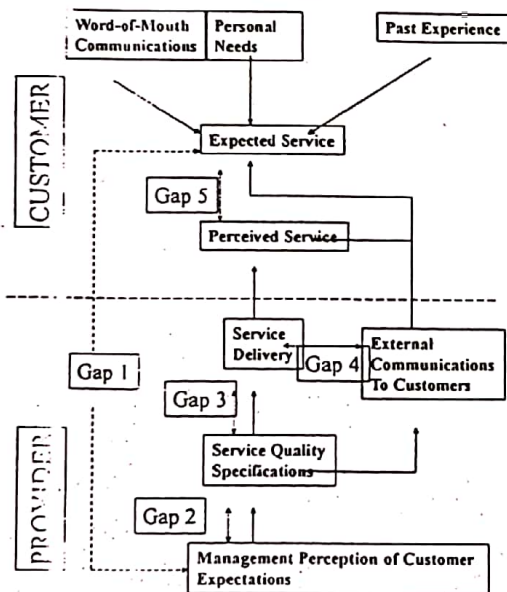
## Quality Attributes

Product	Service
Software	
<ul style="list-style-type: none"> <li>• Conformability</li> <li>• Performance</li> <li>• Features</li> <li>• Reliability</li> <li>• Durability</li> <li>• Serviceability</li> <li>• Aesthetics</li> <li>• Perception</li> </ul>	<ul style="list-style-type: none"> <li>• Tangibles</li> <li>• Reliability</li> <li>• Responsiveness</li> <li>• Competence</li> <li>• Courtesy</li> <li>• Credibility</li> <li>• Security</li> <li>• Access</li> <li>• Communication</li> <li>• Understanding the customer</li> <li>• Correctness</li> <li>• Reliability</li> <li>• Integrity</li> <li>• Usability</li> <li>• Efficiency</li> <li>• Maintainability</li> <li>• Flexibility</li> <li>• Testability</li> <li>• Interoperability</li> <li>• Reusability</li> <li>• Portability</li> </ul>

## Six Aspects of Six Sigma Thinking

- Six Sigma is a new way of doing business.
- Six Sigma thinking is synergy between the following six aspects:
  - Business Thinking.
  - Systems Thinking.
  - Statistical Thinking.
  - Creative Thinking.
  - Emotional Thinking.
  - Lean Thinking.

## A Model for Service Quality



## Six Sigma Organizational Structure and Roles

- Champion - responsible for overall deployment
- Master Black Belt - Helps Champion & Coaches Black Belts
- Black Belt - Implements projects & Coaches Green Belts
- Green Belt - Works as a member in Black Belt Projects. May work on small projects independently.

## Role of Six Sigma Champion

- Identifying the business and removing the roadblocks in achieving high performance with Six Sigma.
- Ensuring that the process owner's support is there during all phases.
- Focusing on Black Belt development.
- Encouraging follow-up and monitoring activities.
- Carefully selecting high impact projects.
- Helping transfer of project ownership from Black Belt to line managers who own the process upon completion of the corrective actions (control phase).

## Green Belts

- Green Belts are employees throughout the organization, who execute Six Sigma as a part of their overall job.
- While working with the Black Belts, they gain experience in the practical application of the Six Sigma methodology and tools.
- Normally, everyone in the organization is expected to become a Green Belt.
- Role of Green Belts
  - Work as a team member in Black Belt projects
  - Lead smaller improvement projects within their respective areas.

## Six Sigma Black Belt

- Implement the Six Sigma methodologies
- Identify, lead breakthrough projects and achieve significant results, which impact the bottom line
- Use statistical tools
- Facilitate and coach the team deployment
- Support champions in Six Sigma deployment

## Critical Success Factors

- Initiate the Change
  - Right Projects.
  - Right People.
  - Right Application Roadmap & Tools.
- Sustain the Change
  - People and Team Development.
  - Right Strategies to dealing with difficult people.
  - Integrate Six Sigma with other Organizational Systems.