

Six Sigma Quality in Service Industry

by Sunil Thawani

When Mr. Jack Welch, ex Chairman of General Electric (GE), learnt that GE was running at 3 to 4 sigma level and the cost saving opportunity of raising current quality level to six sigma level was somewhere between US \$ 7 to 10 billion, he decided to deploy Six Sigma company wide all over the world.

Since 1996, GE has trained thousands of its employees as Project Champions, Green Belts, Black Belts and Master Black Belts to take up improvement projects. GE has claimed to save over US \$ 2 billion. Today many of the world's leading corporations like Dow Chemicals, 3M, Bombardier, Sony are using Six Sigma to improve performance and change work culture.

What is Six Sigma?

Sigma is a Greek alphabet and is used in statistics as a measure of variation in a process i.e. the capability of the process to perform defect free work. A defect is anything that results in customer dissatisfaction. As sigma increases, cost and cycle time go down while profitability, productivity and customer satisfaction go up.

Six sigma is a high performance, data driven approach for analyzing the root causes of business processes/ problems and solving them.

Why Six Sigma?

As per Six Sigma forum, USA, operating at 99 % defect free level means two short or long landings at major airports each day or 15 minutes of unsafe drinking water a day or no electricity for almost 7 hours each month. So even 99 % quality level is not good enough.

Many service company processes often operate at 1 to 2 sigma level i.e. 690,000 to 308,000 defects per million opportunities. Six Sigma's target is to achieve less than 3.4 defects or errors per million opportunities and hence the name.

With increased accuracy in processes come huge opportunities of financial savings and delivering customer satisfaction. It has delivered breakthrough improvements ranging from US \$ 100000 to 250000 per Six Sigma improvement project with radical improvement in cost, speed, defects, customer satisfaction etc.

It is a versatile technique, which has been successfully applied, in manufacturing and non-manufacturing businesses.

Is Six Sigma for Service Industry and Functions?

Though Six Sigma was originally developed for manufacturing processes by Motorola about 15 years back, but today service firms and service functions within almost every sector are using Six Sigma to improve profits and performance. E.g. Dow Chemicals is deploying Six Sigma in their marketing, finance, information systems, legal, and human resources processes.

Unlike manufacturing operations, defining a service defect is quite challenging aspect of applying Six Sigma in service delivery systems. This is because it is not easy to reach an agreement on what is a service defect. Since Six Sigma effort is linked to customers, most six sigma companies define service defect as a flaw in a process that results in lower level of customer satisfaction or a lost customer.

Standardized service processes like issuing credit cards, opening bank account, administering customer loyalty programs etc. can yield substantial benefits from a six sigma effort.

Other standardized processes within a company like purchasing, accounts payable, payroll, budgeting processes etc. can also be strong candidates for applying six sigma.

Citibank, American Express, JP Morgan, GE Capital, Bank of America are some of the leading service companies deploying Six Sigma.

Six Sigma Methodology

DMAIC process of problem solving i.e. Define, Measure, Analyse, Improve and Control is one of the most common Six Sigma methodology which is given below in brief:

Define – Identify, evaluate and select projects for improvement and select teams.

Measure – Collect data on size of the selected problem, identify key customer requirements, determine key product and process characteristics.

Analyze – Analyze data, establish and confirm the “vital few” determinants of the performance.

Improve – Design and carry out experiments to establish cause & effect relationships and optimize the process.

Control – Design the controls, make improvements, implement and monitor.

The Players:

Effective team working is critical to the success of six sigma projects. The roles and responsibilities of various Players is well defined and are as under:

Project Champions are involved in selecting improvement projects and identifying Black and Green Belt candidates. They set improvement targets, provide resources, review the projects on regular basis and remove any roadblocks to programs success.

Master Black Belts (MBB) are the technical leaders of Six Sigma. MBB provide strategic and operational assistance to Project Champions and management in the formation and deployment of the Six Sigma program.

Black Belts (BB) are the backbone of Six Sigma deployment and continuous improvements. They build teams and attack problems by managing projects and then driving the teams for solutions that work, resulting in delivery of bottom line results.

Green Belts (GB) provide internal team support to Black Belts. They assist in data collection, computer data input analysis of data using the software and preparation of reports for management.

Conclusion

Six Sigma methodology links customer, processes and financial benefits. Six Sigma's successes are too significant to be ignored and has generated lot of interest among corporations in the US, Europe and is fast spreading in Asia. The issue is no longer whether Six Sigma should be considered, it is a question of when and how since you cannot do today's job with yesterday's methods and be in business tomorrow .

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