Six Sigma in Service

Understanding the service process is vital for a successful Six Sigma implementation.

by Praveen Gupta

Six Sigma was first practiced in product development and manufacturing environments to improve customer satisfaction. There, significant improvements were achieved and sizable savings realized. After successfully implementing Six Sigma in manufacturing, Motorola applied Six Sigma in support functions and again achieved significant savings. Since then, banks, insurance companies, restaurants, hospitals, schools and many other types of service organizations throughout the world have successfully implemented Six Sigma. Some have even improvised Six Sigma by combining it with lean principles.

Service functions have been an integral part of most corporations. Organizing service functions into a business entity creates a totally different mindset. A service organization acts differently because of a focus on customer requirements and prompt feedback from customers. Service offerings are experienced much faster than products, which sometimes are stocked in a warehouse or a showroom: Once service is delivered, the customer experiences it and expresses satisfaction or dissatisfaction. Because problems must be resolved faster, the challenges in service are different. Customers prefer fast service delivery rather than quality of service. Some companies have switched their emphasis from “better, faster and cheaper” to “faster, better and cheaper” performance levels.

Service organizations consist of transaction and interaction components. The transaction component implies more process dependence for outcome of high-volume functions. Such industries include fast food restaurants, direct mail, banking, health care, insurance and ticketing. The interaction component requires more personal care and attention for outcomes of low-volume and high-value services. Such industries include sit-in restaurants, specialized health care and personal services. The transaction services are expected to be delivered faster, better and cheaper, while the interaction services are expected to be delivered better, faster and cheaper. In other words, the speed of service is more critical in transaction-based services, whereas quality is paramount in interaction-based services. With the advent of technology, the role of the transaction component is growing. However, conventional understanding of service implies more of the interaction function which makes it significantly different from manufacturing processes. The table below illustrates differences between service and manufacturing operations. It’s important to take into account the uniqueness of the service operations for adapting Six Sigma to the service environment.

Comparison of Inputs to Manufacturing and Service Operations

Manufacturing Inputs	Service Inputs
Material	Information
Machine	Tools/Systems
Method	Approach
Technical skills	Inter-personal skills
Quality measurements	Time measurements
Physical environment	Work environment

When implementing Six Sigma in service, consider the strategic, operational, customer and design perspectives in the service environment. One of the differences is the application of DMAIC (Define, Measure, Analyze, Improve and Control) to a service project. Because of the important role people play in the service environment, the control phase, which is used to control a process through statistical tools like SPC, must be adapted. Control of people-driven process can be accomplished through embedding practices with employee training, feedback and recognition. Therefore, the control phase of DMAIC could easily be reclassified as the “Embed” phase to sustain a solution in an organization.

For a successful Six Sigma launch in a service environment, whether in transaction or interaction organizations, one must address distinct aspects of the business. This begins with understanding business performance in terms of a its leadership style, corporate culture, systems and processes, values and decision making, organizational structure and politics, and performance and customer satisfaction. An analysis of various organizational elements should be performed to identify opportunities for improvement. In a restaurant, for example, sales could increase with the improvement of customer service, incentive creation or an effective marketing in the predefined market segment. Profits could also be improved through better inventory management. The business opportunity analysis consists of identifying business profit streams that give away profits or value. At the end of the analysis, it’s crucial to distinctly identify the extent of potential improvement in profitability through the Six Sigma initiative.

Establishing measurements for service processes requires planning and analysis of information, approach, systems and people skills.

One can identify critical inputs, in-process and service characteristics to monitor customer feedback. These are parameters that, if not correctly or effectively managed, would hurt service performance and customer satisfaction. Once the critical parameters have been identified, measurements to assess the effectiveness of a process can be determined by answering the following questions:

- What is the purpose of a service function?
- What are the expected deliverables (people, skills, services, value or reports)?
- What are the measures of key deliverables effectiveness?

These questions can be answered for each key process in an organization when identifying meaningful performance measures. Once the measurements have been identified and improvement goals established, Six Sigma projects can be launched. For a project to be successful, the results must be visible and the goals must be aggressive. Setting aggressive goals will mandate creativity and innovation for developing breakthrough solutions.

To summarize, when implementing Six Sigma in service environment, it's vital to understand the unique aspects of service processes, identify opportunities for improvement and set up effective measures of performance before launching Six Sigma projects.

About the author

Praveen Gupta is a Six Sigma consultant and trainer at Quality Technology Co. He is an ASQ Fellow and has been associated with Six Sigma since 1986 at Motorola. Gupta has taught Six Sigma at Motorola University for more than 10 years. He has authored Six Sigma Business Scorecard*,* The Six Sigma Performance Handbook *and* The Six Sigma Black Belt Handbook*. He has co-authored* Six Sigma in Transactions and Service*, which is due to be published by McGraw Hill later in December 2004.*