Using Six Sigma to Improve IT Help Desk Customer Service

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Within most organizations, the information technology (IT) department typically provides the infrastructure, implementation, and administration of hardware, software, networking, and database management. Unfortunately, employees using these systems sometimes encounter problems that hinder the daily productivity of the organization. When such problems occur, it interrupts the flow of work, thereby causing a loss of revenue. It is the responsibility of the IT Help Desk to analyze and fix such problems. Delays, improper response, and difficulties with follow-up are just some of the causes of inefficiencies in this service process that leads to decreased productivity, customer dissatisfaction, etc. This work describes a project to improve customer service for an IT Help Desk within a mid-size accounting firm. At the time this project was initiated, the IT Help Desk was in violation of their service level agreement for 1/6th of the help requests submitted resulting in a loss of productivity and revenue for the company. To address this issue, the Six Sigma methodology was used to determine the root cause of process inefficiencies and implement corrective actions to improve the quality of customer service provided by the IT Help Desk.

Six Sigma is a structured problem solving methodology that can be applied to help decrease the variation and improve the efficiency of any process in order to better serve customers and improve competitiveness. This approach was originally developed by Motorola in the late 1980s as a quality improvement initiative to eliminate defects through the reduction of variation in manufacturing and business processes (Pande et al., 2000). This approach improves performance by eliminating quality problems before they occur, which saves valuable corporate resources and improves the bottom line performance of an organization. Six Sigma projects generally follow a defined sequence of five steps, known as the DMAIC (Define, Measure, Analyze, Improve, and Control) methodology (El-Haik and Roy, 2005). The project discussed here was conducted in the IT department at Gainer, Donnelly & Desroches, which is a mid-size certified public accounting firm located in Houston, Texas. This firm offers a multitude of professional services including audit, tax, bookkeeping, and risk services, in a variety of industries, such as real estate, energy, and manufacturing, and it is the eighth largest public accounting firm in the Houston area (Ferweda, 2010). The following explanation describes the work done to improve customer service for the firm's IT Help Desk in order to reduce the amount of system downtime experienced by users (i.e., employees).

In the define phase of this project, the purpose, objective, and scope were determined and the project charter was created. The project charter officially established the project scope, team members, and their roles and responsibilities. The purpose of the project was specifically outlined in the project's problem and mission statements as follows:

Problem statement: The IT Help Desk at Gainer, Donnelly & Desroches has violated their service level agreement (SLA) 16% of the time in the past 9 months, resulting in loss of productivity due to excessive system downtime experienced by employees.

Mission statement: Reduce the percentage of SLA violations to less than 3% the next 6 months, resulting in a savings of approximately 500 hours of system downtime.

In the measure phase, first the service process for the IT Help Desk was mapped. In the current process, help request tickets generated by employees are received by the IT Help Desk through a web interface and are classified and assigned to an analyst for resolution. Once the issue is resolved, the ticket is closed. The next step in the measure phase was to verify the measurement system used to track both the percentage of SLA violations and the time to resolve help request tickets. Finally, the capability of the process was measured to establish a baseline measurement for the project.

In the analyze phase, further data about the current situation was evaluated using Pareto charts. This analysis showed that more than 50% of SLA violations were caused by software related help request tickets. Of these, more than 30% violated the SLA because the tickets had not been assigned to an analyst. This finding suggested that the current service process lacked the capacity to handle the present level of help request tickets. To address this problem, the causes of inefficiencies within the IT Help Desk service process were identified. This work was organized in a cause-and-effect diagram and was used to develop ideas for how to reduce the time required to resolve help request tickets, thereby effectively creating additional capacity to address more help request tickets in the future.

In the improve phase, a prioritization matrix was used to select the best ideas for reducing the time to resolve help request tickets. Once the best solution ideas were identified, the process was adjusted to accommodate these changes. These changes involved things such as improving training for employees, creating and implementing a new process model, updating the software and operating systems on a regular basis, and implementing remote access/control for the analysts and IT Help Desk staff.

In the control phase, the improved process was documented in new standard operating procedures and all IT Help Desk staff were trained on these new procedures. In addition, an audit process was established to track adherence to these new procedures. This approach also facilitated feedback to IT Help Desk staff about their work performance from both the department manager and their peers.

Before this Six Sigma project was initiated, there was a significant amount system downtime caused by unresolved help request tickets, which caused a loss of productivity for the company.

Through the application of the Six Sigma methodology, the quality of customer service for the IT Help Desk was successfully improved. Now, the percentage of SLA violations have been reduced, resulting in improved productivity and customer satisfaction as well as increased revenue for the firm.

References

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