

Six Sigma -- it's not just for manufacturers anymore

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During the past 10 years, businesses have deployed a wealth of information technologies to increase revenue, reduce operational costs, and improve customer service. Yet many CIOs find it difficult to tell whether these investments are producing satisfactory ROI. To understand what really works, and why, these enterprises are turning to process-improvement methodologies like Six Sigma.



Developed in the 1980s by Motorola Inc. to reduce manufacturing defects, the Six Sigma methodology focuses on eliminating the defects that drive customer dissatisfaction and customer defections. (Indeed, some observers have characterized Six Sigma as a "defect-reduction" methodology.) Users of the Six Sigma methodology have demonstrated that the surest way to improve performance is to systematically identify the causes of waste, lost productivity and customer dissatisfaction, and then adjust internal processes to eliminate them. These successes have encouraged many retail and service businesses to apply Six Sigma to non-manufacturing operations.

The Six Sigma methodology demands that a company begin by identifying the defects that influence customer satisfaction the most. For each factor, the company then determines an acceptable range.

Managers in any industry can improve any business operation by applying Six Sigma's DMAIC process -- to define, measure, analyze, improve and control the key processes that affect customer satisfaction. To show how this method may be applied in a non-manufacturing business, we will use an example from retail banking.

During the past 10 years, retail banks have implemented numerous new technologies and marketing programs to improve service delivery and boost earnings. Banks offer an ever-widening range of financial products through constantly expanding branch networks. To successfully market new products like investments and insurance, banks now find themselves cross-training branch employees for a much wider variety of roles. For a bank to make sure it has the right people with the right skills available at the right time is a growing challenge.

Optimizing staff levels is only one example of the challenges that retail banks face as they struggle to improve branch-customer satisfaction while simultaneously reducing costs. Today's customers demand a positive service experience -- accurate, friendly and fast -- every time. If they don't get it, they won't hesitate to defect to a nearby competitor.

Define

The first step of the Six Sigma DMAIC initiative is to clearly define the boundaries and objectives of a specific project. For retail banks, improved branch-customer satisfaction is usually a key objective. The first step here is for the bank to define the core processes within the organization that involve customer interactions and are directly related to customer satisfaction. Specific examples might include teller window transactions, new account openings, CD rollovers and address changes.

Measure

The second step is for managers to establish quantitative measures that can yield statistically valid data. Not all factors have an equal impact on customer satisfaction. Retail banks generally find that wait times typically have the strongest impact on customer satisfaction. To benchmark performance, the bank may set a key metric of servicing 85% of its retail customers within five minutes. The bank can then assign observers to measure wait times at various branches under differing conditions.

Analyze

Once the bank has defined the parameters, documented baseline performance and gathered data, it must then analyze results to identify opportunities for improvement. The analysis must examine all the activities that are part of each bank/customer interaction. Activities involved in check cashing, for instance, may include the customer's preparations before coming to the window, the customer's request for cash back, and the teller's

having to seek manager approval for the transaction. The bank must examine each of these activities to determine which have the greatest impact on overall transaction time.

It is important to apply accepted statistical tools to identify the root causes of problems in this business process. Assume that the data gathered shows that customers were unprepared 50% of the time and that manager approvals were required in only 15% of all check-cashing transactions. Lack of customer preparedness might appear to be the greater contributor to longer transaction times. Proper regression analysis, however, may reveal that managerial approvals -- which usually require that tellers leave their windows -- have a much greater impact, adding more than five minutes to actual wait times.

Improve

As soon as our bank identifies the factors that slow transactions, it should initiate actions to minimize the impact of these factors. The bank can, for example, design experiments to evaluate the impact of proposed improvements to every activity in the check-cashing process. To eliminate the need for tellers to leave the window for manager approvals, the bank may set up an experiment where supervisors come to the teller window. In a separate experiment, the bank may measure the impact of letting tellers approve more transactions on their own. Careful measurement of wait times in these two experiments will indicate which new practice has the more beneficial effect on wait times.

Control

Control is the final step in the DMAIC cycle. The control step demands that the bank continually monitor the metrics it has put into place. This process requires periodic measurements using the same data-gathering protocols established at the beginning of the project.

Perhaps the greatest strength of the Six Sigma method is that it produces objective, measurable results that can be monitored continuously. In one case, a bank implemented a Six Sigma project to reduce customer wait times, just like in our example. By identifying and controlling the key factors that did the most to increase transaction times, the bank was able to lower its average transaction time from 2.45 minutes to 1.80 minutes, significantly improving customer satisfaction while simultaneously reducing staffing costs.

But Six Sigma principles are not limited to reducing customer wait times. Banks have also implemented Six Sigma programs to reduce theft and fraud, and to meet other objectives as well. The Six Sigma DMAIC process can be applied throughout the retail banking organization, wherever managers require measurable results, to design, validate and monitor business process improvements.

Applying Six Sigma's DMAIC process has enabled banks to implement corrective actions based on empirical evidence rather than on anecdotal evidence and gut feeling. In addition, a successful Six Sigma project establishes a precedent for evaluating new programs and technology investments.

CIOs face constant demands from senior management to document "results" for IT expenditures. Six Sigma offers a proven methodology for establishing such results. More important, the quantitative results that Six Sigma provides will allow CIOs to propose and test continued improvements, both to their own IT operations and to the mission-critical business processes they support.

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