Six Sigma Sharpens Services

Not just for manufacturing anymore, the superhero of methodologies has improved financial and telecom sectors.

by Zachery Brice

Since Six Sigma was first developed at Motorola, refined at AlliedSignal and transformed into legend at GE under Jack Welch, it has found legions of new converts in myriad business sectors. Now this successful quality initiative is revolutionizing not just manufacturing but also service industries, including outsourcing, financial services and telecommunications organizations.

Six Sigma—originally designed to perfect manufacturing processes that were already highly engineered—might seem ill-suited to service organizations, wherein processes aren't engineered at all. But this is precisely why the methodology has something valuable to offer service organizations. Because many service businesses (which often suffer from inflated costs and poor customer service) have never analyzed their processes, they are ripe with potential for process improvement.

From task to process

Six Sigma's wider applicability was first glimpsed at GE. The company understood that Six Sigma techniques could be applied to any process that resulted in defects, whether they be faulty products, financial transactions or business processes. With this knowledge, GE soon expanded Six Sigma to its service businesses, GE Financial.

The heart of every service-based business depends on the opinions, behaviors and decisions of people acting through work processes. Analyzing and modifying human performance in these environments is complex. Nevertheless, task-oriented service organizations including mortgage lenders, wireless phone providers and call centers have discovered that Six Sigma brings a process focus to their operations (e.g., streamlined mortgage approval procedures, improved customer service processes and improved customer-problem resolution).

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Financial services

Six Sigma has been particularly successful in the financial services sector, in which performance management is critical. Customers expect faster and easier service at every point of contact—and if they don't get it, they go elsewhere.

The economic boom of the 1990s strained many lending institutions' capacity to originate, close and service loans quickly enough to meet customer demand. As a result, companies attempted to improve the cycle times of all processes, break bottlenecks, minimize errors, cut costs, increase capacity and delight customers. They had discovered that providing more value per customer transaction—rather than securing more transactions—leads to market leadership. Simply put, delighting existing customers can be more important than finding new ones, as this intense focus on customer satisfaction leads to top-line growth and drives greater shareholder value.

By using Six Sigma's define-measure-analyze-improve-control process, leading financial services organizations have worked to reach the methodology's aim of near error-free performance. Moreover, this goal is relevant to all processes, from handling customers' money, to processing payments, to sending out bills, to closing a loan, to answering the phone.

The international private banking division of one of the world's largest banking and financial services companies provides an example. The group faced increasing customer dissatisfaction as a result of inefficiencies in its international wire-transfer operations. The inefficiencies greatly increased the bank's annual wire-processing costs, some of which the bank passed along to customers through transaction fees—despite the fact that the bank's own surveys identify fees as a key customer concern.

The bank used Six Sigma to redesign its international wire-transfer process, greatly reducing the errors, customer callbacks, transfer delays and transfer fees that inconvenienced customers and contributed to high rates of customer churn. Transfer cycle time was slashed 46 percent, which, coupled with an extended cutoff time for making transfers, has all but eliminated delayed wires. Slashing the cost-per-payment order by more than 50 percent has also enabled the division to waive its transaction fees entirely, further improving customer satisfaction. In addition to helping the bank retain valued customers, the improvements could save the company nearly $1 million annually. And perhaps a more important (albeit less quantifiable) result is that the bank has improved its reputation in its customers' eyes.

A leading mortgage banking firm offers another example of how Six Sigma can drive customer satisfaction and ultimately increase market share and growth. The bank, whose clientele includes borrowers disqualified from traditional loan sources, wanted to improve customer satisfaction and increase investor confidence. In addition to establishing a customer-relationship management initiative, the firm introduced Six Sigma into key business processes by training in-house Six Sigma experts to lead critical process redesign projects. Once the initiative was launched, the bank not only addressed customer and investor issues but also produced significant and unanticipated increases in revenue and reductions in costs.

The lender improved customer satisfaction and response time by 350 percent, cutting "abandoned customer call" rates from 12 to 4 percent and reducing process redundancies by 66 percent. At the same time, an increase in loan retention of 20 percent and the elimination of $21 million in risk exposure boosted investor confidence. Together, these improvements save the company $5.5 million annually and have generated additional revenues of $1 million.

Telecommunications

Following that solid record of success in financial services, the next Six Sigma revolution is likely to take place in the telecommunications industry. Both the telecommunications equipment and services sectors have been badly battered in recent years. Total spending on equipment fell by about 15 percent in 2001 and another 20 percent in 2002. Long-haul optical networks now operate at less than half their capacity. Until sales of core wire-line equipment pick up, manufacturers in the United States and Europe also face the challenge of developing products to deliver data and voice traffic from long-distance networks to broadband customers in urban areas. The mobile communications segment is also changing as exhaustively hyped mobile data services and third-generation wireless technology arrive.

During the late 1990s, the telecommunications services sector held fast to the motto, "Build it and they will come." After the Telecommunications Act of 1996 passed, the telecom sector rode the high-tech current of an economic expansion that, in retrospect, appears to have been built on blind faith. During the five years following the 1996 legislation, the telecom industry received $1.3 trillion from investors and has since lost more than $1 trillion in market value.

For telecommunications equipment and services, short- and long-term success depends on excelling in operational focus, financial discipline and opportunistic growth. Six Sigma can help with all three. What follow are examples illustrating highly focused projects that suggest the enormous potential of applying Six Sigma to the telecommunications industry:

■ *Increasing sales force availability for customers in emerging markets.* Relentless competition in telecommunications requires an account team that can assess customer needs and submit quotes quickly. Nevertheless, Six Sigma analysis suggests that salespeople in the emerging market for a telecommunications provider spend an average of 52 percent of their time in non-value-added activities such as travel, meetings and customer service issues—despite the fact that the company depends on increased sales force productivity to weather the economic downturn and industry turmoil.

Six Sigma analysis uncovers statistically and economically significant relationships between the time spent on nonvalue-added activities, the extent of a salesperson's territory (whether the salesperson sets his or her own customer appointments or these are preset), and the amount of time and territory-management skills required to provide outstanding service.

A company can address all these factors by setting up a special call center team to set appointments for salespeople and develop a process for route management that enables the team to prioritize appointments in the most geographically efficient way. As a result, salespeople can spend more time in front of prospective customers, save money on travel and spend less time on nonvalue-added activities.

■ *Reducing the sales-to-cash interval.* As a private branch exchange dealer/distributor's selling model shifts to resale, the company must forecast and accelerate customers' payments after installation more accurately in order to reduce exposure to creditors. The sales-to-cash interval averages four months, whereas reducing it by only one month would save $550,000. However, the company's sales-to-cash process is complex, with numerous interdependencies that can cause excessive delay. A Six Sigma team finds that the longest interval under direct control is the time from installation to posting the invoice. The average time stands at 18.3 days, costing the company $420,000 annually in delayed revenue.

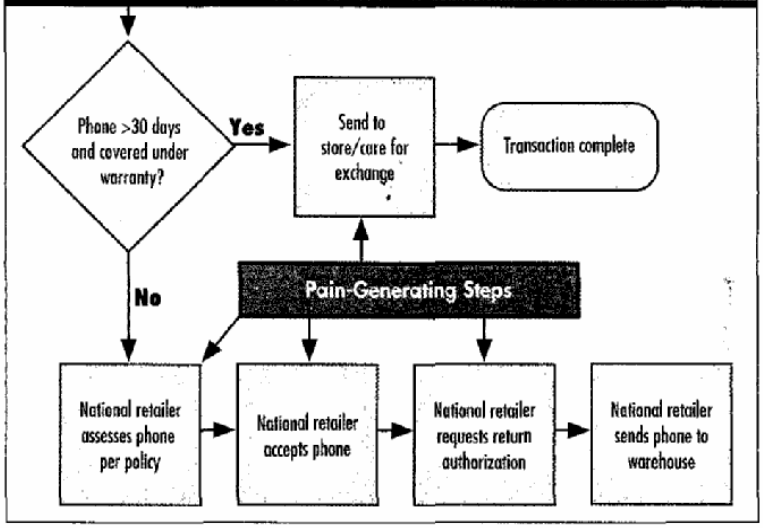
Focusing on this critical interval, the team develops a database to track an order through its entire life cycle, creates tools for process operators to monitor overdue orders, modifies the process for more direct operator communication and develops a means for regular process control review and discussion. The interval is reduced by 7.5 days, which results in annual savings of $420,000. In addition to increasing the accuracy and timeliness of customer billings, improving forecasting accuracy, and reducing internal costs, the project leads to modifications in setting customer expectations and paves the way for an improved collections process.

■ *Reducing business market collections.* A telecommunications provider focused on generating sales revenue in its business market performs poorly when it comes to collecting that revenue. A preliminary analysis by a Six Sigma team determines that 60 percent of billed revenue, or approximately $25 million, goes 60 days past due every month—jeopardizing the company's objective to achieve positive cash flow by the end of the year.

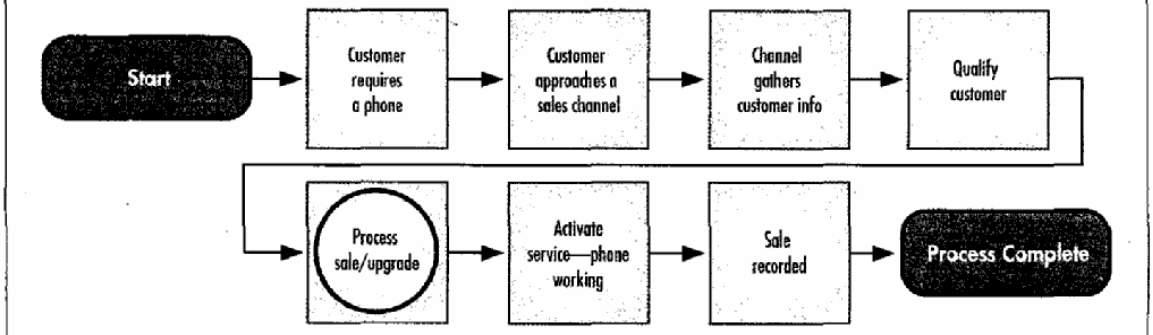
Combining Six Sigma analytical tools and business process management, the team's program to reduce defects in the collections process includes reprioritizing collections work, assigning collections representatives to strategic accounts, conducting collections blitzkriegs, stopping the high turnover in the collections manager position and implementing a new call strategy. The project reduces by almost 18 percent the total past due greater than 60 days, increasing revenue by $2.4 million.

These examples illustrate only a few of the many processes and functions that Six Sigma in telecommunications can address. From maintenance, procurement

Example: Handset Return/Exchange Process



High-Level Sales Process Map



Process mapping uncovers upgrade as site of greatest business pain

and operations to customer care, sales cycle time, cost-per-transaction and duplications, Six Sigma will likely make enormous differences in customer satisfaction, revenues and costs. And as the methodology spreads to more of those functions, its benefits will grow exponentially.

Succeeding with Six Sigma in services

Successfully implementing Six Sigma in the service sector requires a relentless focus on customers, specifically, meeting their needs as efficiently as possible. This requires four critical steps:

1. *Define what's critical to your customers and confirm that your core processes are aligned to those requirements.* As the term "services" implies, you must understand your customers' needs before you can serve them. Find out what those needs are through surveys, call center data, focus groups, promotional campaigns—whatever means allow the voice of the customer to be heard clearly. At the same time, you must understand the key business issues for your company and align the voice of the customer with them.

2. *Translate customer requirements into measurable characteristics of your processes.* Once you understand customer requirements, you must fulfill them by measuring your processes' effectiveness and efficiency. "Effectiveness" means addressing the problem of defects that your processes produce; "efficiency" means addressing the time and money that the processes consume in meeting customer needs. A high rate of defects, and time and money wasted in nonvalue-added activities, increases your cost-per-transaction. The formula for translating customer requirements into measurable characteristics is simple: "as measured by."

For example, if on-time delivery is important for your customer, the metric would typically be "on-time delivery as measured by the time from the promised date to the date of actual fulfillment."

3. *Quantify the effect of gaps in your processes in terms of the cost of poor quality.* For example, a mortgage lender whose customers want fast action on their applications might find that the process includes a high number of abandoned calls by customers or long delays in producing quotes, causing a drop in prospects and numerous inaccurate credit reports. The Six Sigma methodology includes powerful tools for analyzing each of those gaps and quantifying the related cost of poor quality.

4. *Prioritize improvement projects.* Once you clearly understand what each process gap costs, you can prioritize improvement efforts according to what's most critical to your company (e.g., customer service, time, money, perceived value or other criteria). Because improvement in any organization proceeds project by project, you must ensure that you're investing your effort in the right projects in the right order.

Above all, you must continue to look at your business through your customers' eyes. It's possible—but pointless—to redesign your internal processes and never address your customers' real needs. However, don't remake your processes with *only* the customer in mind. You must also address your stakeholders' concerns and ensure that your customer-pleasing processes also meet the critical needs of your business. Six Sigma provides a means for keeping those sometimes competing voices in perfect harmony.

From Fixing Defects to Fulfilling Business Needs

If Six Sigma isn't just for manufacturing anymore, it isn't just for remedying defects, either. The renowned methodology can also be applied proactively to fulfill a pressing business need. The wireless telephone industry provides a case in point. Although the business has grown phenomenally during the past six years, it's now maturing. To maintain profitable growth, it has become increasingly necessary to acquire high-value customers as cost-effectively as possible. To maintain its competitive edge, a regional telephone company decided to slash its cost-per-gross-add of a new wireless customer.

Through process mapping the entire sales cycle, a Six Sigma team determined that the greatest opportunity for reducing CPGA lay in the costs of upgrading and replacing customers' malfunctioning handsets, as illustrated on page 40. The team zeroed in on the upgrade and exchange process, uncovering key areas where problems were likely to increase costs in returns and exchanges.

At this point, the team applied Pareto analysis to identify process capabilities and develop a program for improvement. The team broke return/exchanges into three classes based on whether the return occurred fewer than 30 days after the sale, more than 30 days to a year after the sale, and more than a year after the sale. The information allowed them to pinpoint improvements in each of these circumstances.

The improvements included working more closely with the handset manufacturer, working with retailers to improve their internal processes, insisting on compliance with a return/exchange policy, automating some key processes to eliminate errors and reeducating customers on how best to handle problems with handsets. As a result of these efforts, the team reduced more than $236,500 in expenses annually.