Improved Response Time

Increases Revenue for Global Lender

by Janet Jacobsen

At a Glance . . .

- With auto loan interest rates basically a commodity, response times on credit decisions and service levels are now the main differentiators for consumers.

- One global lender was losing 40% of its applications for auto loans in Latin America, mainly due to slow response times.

- To address this issue, a Six Sigma team was formed to identify the root causes of uncompetitive response time, reduce response time to surpass the competition, and convert 5% of lost business to approved loans.

- Through the use of basic lean and Six Sigma tools, response times improved by as much as 98%, and contract volume increased by up to 120%.

- Key Players:
  - Auto dealers in four Latin American countries
  - Prospective car buyers with a need to finance the purchase
  - The lender

For car buyers in Colombia and Venezuela, it wasn't uncommon to wait nearly 24 hours for initial approval on dealer financing. Not only were lender response times extremely slow, but the dealers also contributed to the wait by not promptly informing buyers of the credit decision. Unfortunately for the dealers and lenders, such delays provided sufficient time for consumers to shop around, not only for a new vehicle but also for financing options.

One global lender, in partnership with ProcessArc, a consulting firm specializing in Six Sigma for financial services, discovered that it was losing 40% of its applications at various process stages. Six Sigma helped reveal that slow response time was the key driver for the loss.

Bringing Six Sigma to the Financial World

When one of the world's largest lenders discovered that revenues for its Latin American auto financing operations were flat, it embarked on a mission to collect feedback from first-tier customers, in this case, auto dealers. Overwhelmingly, the dealers reported that credit decision response time was the number one issue that the lender needed to improve. A quick initial credit decision keeps the customer from shopping elsewhere, both for a car and for the financing.

A team of Six Sigma Black Belts from the lender then began to quantify the effects of slow response time and learned that 40% of credit applications weren't moving past the initial application stage, either because the application was rejected or the customer went elsewhere for financing. This 40% figure translated into $110 million in lost revenue annually for the lender.

Figure 1 shows a process map detailing the initial activities included in the auto loan application process. There are two major milestones in the credit-approval process:

1. An initial credit decision is made to accept the application as-is, accept with conditions, reject the application, or classify the application as "active."
2. If the application is accepted and the car buyer agrees to the financing terms, the lending company purchases the credit contract.

In the United States, the initial credit decision typically takes just a few minutes, but in Latin American countries the time is much greater—sometimes as long as 24 hours.

Given the voice of the customer (VOC) data, which highlighted the importance of credit decision response times and the tremendous opportunity to capture lost revenue, the lender's Six Sigma team embarked on an ambitious improvement journey to accomplish three goals:

- Identify the root causes of uncompetitive response times.
- Reduce response times to surpass the competition.

- Increase revenue by converting 5% of "lost" applications to purchased contracts.

Improving Customer Response Time

Uncovering Root Causes

Beginning in early 2007, the newly formed Six Sigma team, led and coached by ProcessArc, developed and implemented the required data collection plans for the organization's processing centers in several Latin American countries. The team completed the "define" and "measure" phases of the project by benchmarking the competition and collecting VOC data from second-tier customers, the auto buyers who required the loans. Here, the Black Belts discovered a new twist: No matter how fast the lender responded to the car dealers with credit decisions (a median of 24 hours), 75% of customers weren't notified by the car dealers until five days or more had elapsed. Two reasons for these delays were uncovered:

1. The dealers' salespeople were busy selling cars and didn't take the time to pass along the initial credit decisions to the buyers.
2. Low inventory levels caused some salespeople to delay financing notification until the vehicles became available.

With this information in hand, the Six Sigma team turned to process mapping to follow the life cycle of a loan application through the lender's process. Black Belts also gathered approximately six months of operational data from the company's data warehouse, segmented the data, and analyzed it to determine how staff behavior was impacting performance.

In addition to process mapping, other lean and Six Sigma tools utilized to discover the true variables impacting the customer experience included:

- SIPOC (suppliers, inputs, process, outputs, customers) and value stream mapping diagrams, which are tools used by Six Sigma process improvement teams to identify all relevant elements of a process improvement project before work begins

- Fishbone diagrams, as shown in Figure 2
- TAKT time (calculated by dividing production time by the quantity of product the customer requires in that time) and head count assessment
- Pareto charts
- Data analysis/tracking of incoming applications, volume flow per hour, and other measures

By using fishbone diagrams and TAKT time analysis, along with process maps for each country's loan processing center, the team identified the main drivers for response time. Black Belts then constructed a failure mode and effects analysis to ensure the impact of the failure in each area was understood.

The Black Belts discovered that aside from the usual "approve," "approve with conditions," and "reject" credit responses, a fourth one existed called "active," which occurred when a credit decision couldn't be made by the credit analyst given the information provided about the borrower. Approximately 35% of applications remained indefinitely in this category. The investigation identified two central reasons for this problem:

- Inconsistent credit guidelines utilized by the credit analysts
- The outsourced credit verification calls

All applications went through an outsourced credit verification call, with the central purpose of detecting potential fraud. The result of the verification call was a factor utilized in the credit analysis. Without a verification call, a credit decision could not be made and the response would be delayed. However, there were three concerns with the credit verification supplier: It utilized a batch process providing the required data to the lender only on an hourly basis, it stopped daily operations at 4:00 p.m., and it categorized an application as "active" if after one attempt it was unable to reach the customer. Approximately 40% of applications each day were tagged with "active" status. These applications were batched and re-sent to the credit verification call center for another attempt. This process was repeated indefinitely, leaving some customers without a decision on their loan applications.

Figure 1—Process map illustrating steps and time frames involved in the loan process
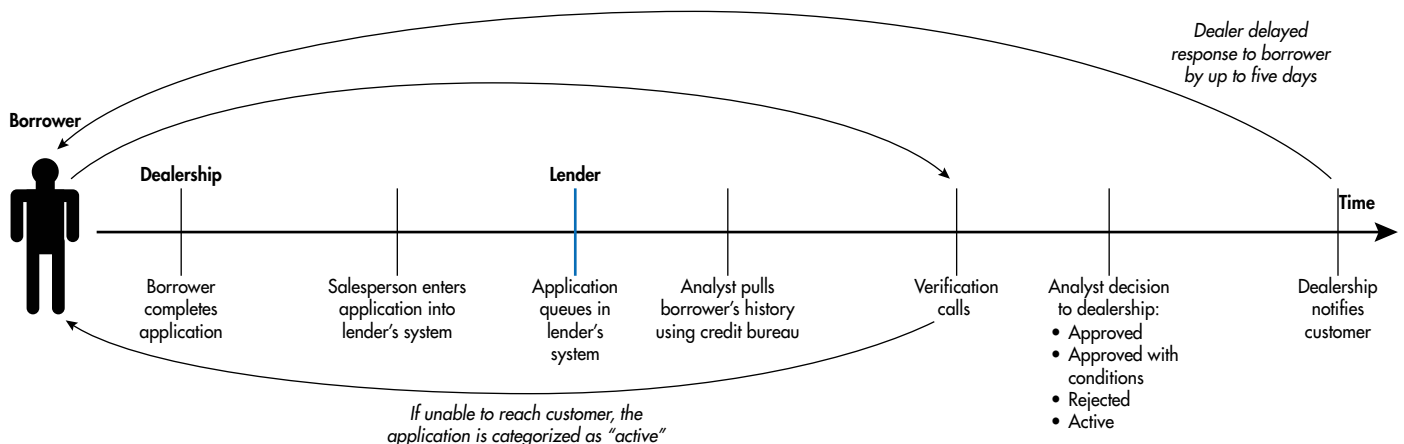
The Black Belt team also concluded that relying on the dealers to notify customers on the credit decision was something that required change. Other key findings, which all impacted the lender's ability to respond quickly, included:

- The approval process was longer for more expensive vehicles, as additional levels of approval were required.
- The lender's operating hours did not match those of the dealers.
- The lender did not employ enough credit analysts to keep up with work volume.

Moving Toward Process Improvement

Given the key findings, improvement strategies were clear:

- Reengineer internal processes so that verification calls could be made after, instead of before, the initial credit decision. Bring this process in house to decrease cycle time (this ultimately led to a 40% decrease in "active" status applications and associated rework activities).
- Standardize credit analysis guidelines and provide training for the dealers' staff members to improve the accuracy of credit applications. Fewer applications in active status translates to more approved contracts.
- Implement a low-cost mechanism to inform customers immediately when their applications are initially approved. Given the high number of customers (more than 90%) who list a cell phone number on the application, text messaging from the lender directly to the car buyer was a logical solution, and it took the salesperson out of the notification loop.
- Readjust the staffing headcount to handle the increased volume of work.

Gaining Support and Overcoming Resistance

The Black Belts say their biggest obstacle was a lack of data at the beginning of the project, something they believe is common in the financial sector. Another hurdle they faced was the absence of functional systems to follow up easily on process performance. Ultimately, a control dashboard was designed for routine monitoring of organizational performance on key measures.

Members of the Six Sigma team worked closely with key managers to gain support for the process changes. By presenting a fact-based case for improvement, they secured the needed commitment of key leaders to move the improvements forward.

## Calculating Improved Response Time, Increased Capacity, and Incremental Revenue

In less than one year the Six Sigma strategy was making a big impact on the lender's operations and to the bottom line. Table 1 shows the significant gains achieved by improving the initial response time for credit decisions. In Colombia, the response time dropped from 22 hours to a mere 20 minutes. In Venezuela, similar results were posted, as response time plummeted from nearly a full day to just 50 minutes.

By increasing capacity through improved internal processes and significant improvements in response time, operations in three of the four countries also achieved significant increases in incoming

Table 1—Response time for initial credit decision

	Argentina	Colombia	Mexico	Venezuela
Initial response time (application to credit decision)	48 minutes	22 hours	2 hours	23 hours
Response time, post-improvement	20 minutes	20 minutes	15 minutes	50 minutes
Improvement in response time (%)	58%	98%	88%	96%

Figure 2—Fishbone diagram for identifying root causes for poor response time
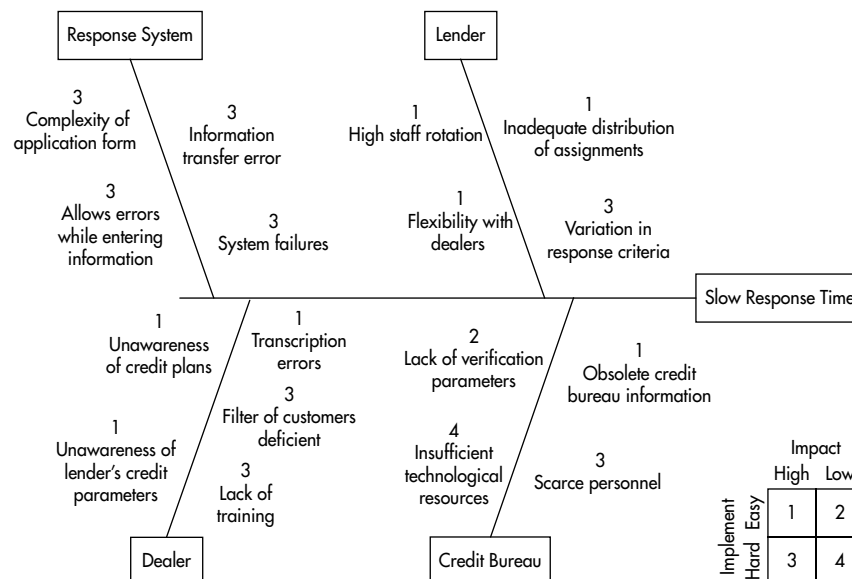
applications, as highlighted in Table 2. This table also details sizable increases in the number of applications purchased, as well as decreases in "active" applications, a status that typically leads to lost business.

Table 2—Increases in applications and decreases in "active" applications

	Argentina	Colombia	Mexico	Venezuela
Percent increase in incoming applications	50%	35%	No increase in incoming applications	120%
Percent increase in applications purchased	8%	25%	10%	75%
Percent *decrease* in "active" applications	86%	54%	67%	40%

These impressive results are expected to translate into financial gains through incremental revenue generated by increased capacity and improved response time. In 2008 incremental revenue is expected to reach the $20 million mark in Colombia, with Mexico, Argentina, and Venezuela together projected to earn another $14.5 million (Table 3).

Table 3—Projected incremental income for 2008

	Argentina	Colombia	Mexico	Venezuela
Projected incremental revenue for 2008 (in U.S. dollars)	$1.5 million	$20 million	$8 million	$5 million

To sustain the improvements in response time, a control dashboard system was implemented to ensure consistent monitoring of the lender's performance on key metrics. The dashboard allows the operations manager to monitor cycle times, backlogs, percentage of applications that are in "active" status, and other metrics on a daily basis. Each metric has specification limits, such as a 20-minute response time for initial credit decisions.

Permanent fixes to internal process are another way the lender is working to keep performance at goal levels. In this case, the lender hired additional employees to manage the incoming applications in a timely manner, extended its hours of operation to mirror the dealers' business hours, and eliminated escalation points that caused delays in processing loan applications for luxury vehicles.

Driving Six Sigma Through the Supply Chain

The dealers were so impressed with Six Sigma and the results that they began requesting training so they, too, can bring the value of Six Sigma to their dealerships. Now as the lender continues to use Six Sigma tools to improve internal efficiencies, it is also leveraging the methodology to create a new revenue stream by providing training and consulting services to its dealer customers.

For More Information

- For further information on using quality tools in the finance sector, see ASQ's Web site at www.asq.org/financial/index.html.
- To learn more about ProcessArc, visit the organization's Web site at www.processarc.com, call Sheila Shaffie at 414-232-3622, or visit Shaffie's blog at www4.asq.org/blogs/financial-services-six-sigma.

About the Author

Janet Jacobsen is a freelance writer specializing in quality and compliance topics. A graduate of Drake University, she resides in Cedar Rapids, Iowa.