



Sloan Consulting

PRODUCTIVITY, QUALITY, INFORMATION AND BUSINESS SYSTEM SOLUTIONS

Breakthrough Case Study in Success

Business Excellence, Lean, Operational Excellence, and Six Sigma use science to solve business problems. Solutions improve profits. Six Sigma's classic **Define, Measure, Analyze, Improve, and Control (DMAIC)** cycle is handy way to summarize success.

PROJECT: Days in Accounts Receivable

Issue: A service enterprise needed to dramatically improve the speed, quantity, and quality of its cash flow. Days in accounts receivable ranged from 35 to 72 days. A breakthrough improvement project could yield as much as 35K per month, or \$420,000 per year. This project was prioritized by the quality council.

Breakthrough DMAIC Strategy, Tactics, and Results

Define: For years debate had raged over what could be done to reduce days in accounts receivable, days in accounts receivable (AR). The suspected causes for long AR days were varied. These suspicions, or hypotheses, included:

- Hypothesis 1 (H₁) Good managers have short AR days. Bad managers have lengthy days in AR.
- Hypothesis 2 (H₂) The number of visits made to the customer is key. The more visits, the longer the days in AR.
- Hypothesis 3 (H₃) The customer is the main reason for long or short AR days.
- Hypothesis 4 (H₄) The length of the customer relationship is the reason. Longer term customers slower because they know we are dependent on them.
- Hypothesis 5 (H₅) The number of services provided causes slow payment. More services create complexity that slows payment.

Measure: A significant amount of Days in AR data had been collected and stored in file cabinets. Each customer, and there were hundreds of them, had a folder with each bill filed in near chronological order. Software helped Mr. Sloan a sampling plan for measuring this five-factor problem.

A billing clerk and a billing manager agreed to randomly pull records that matched the sampling plan over a series of three weekends. Using their expert subject matter

knowledge, a total of 32 records were pulled. This data replicated the 16 samples drawn using the “fractional factorial” sampling plan.

Analyze: Statistically and economically significant differences emerged for only one hypothesis. The customer was the main effect. No other variable had any effect.

Improve: Customers with short days in AR were billed electronically! The other customer billed manually. This organization’s Chief Financial Officer did not “like to use computers.” Consequently the finance department had been unwilling to spend \$15,000 on a new desktop computer system needed to bill all customers electronically. Following a senior management level presentation, the hardware and software were purchased immediately.

Control: Though it took years after this project was completed, the finance department gradually began its transformation to electronic billing. Computer literacy is still not a highly valued skill set in this culture, but progress has been made.

Financial Results: Results produced by lowering days in AR by 30 days exceeded the projected 420K gain in the first year. Total time required to complete project was 90 days.

