

## Manufacturing Operations Improvements At Leading Manufacturer Of Industrial And Commercial Machines: Quality Management Program To Ensure High Returns From Quality Assurance Spending

**The Challenge:** A leading producer of commercial and industrial machines had to quickly gain operational efficiency after a buyout. Operations managers had identified quality spending as an area with high-potential for savings believing that the cost of quality was higher than financial reports currently reflected, and that the company was not realizing much of the potential benefit of its quality spending because of the ad-hoc nature of the quality processes in place. Our help was requested to identify the magnitude of quality costs, and to design a program that would raise the overall effectiveness of quality spending.

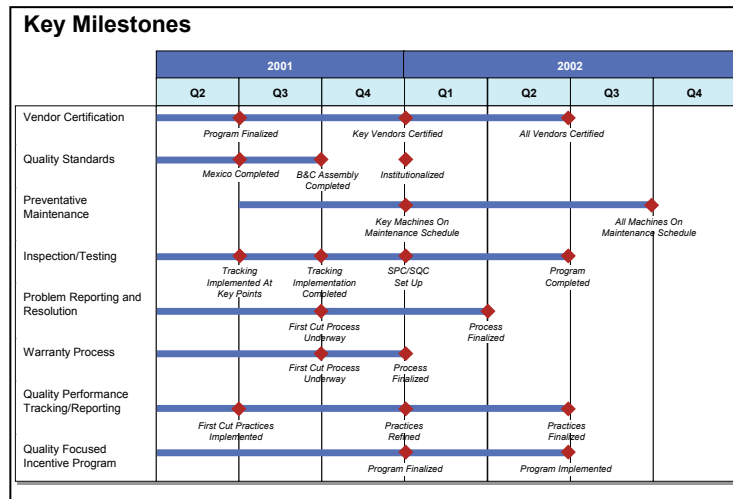
### The Partnership:

**Analysis:** After several weeks of analyzing plant activities, tracking shop-floor activity, and interviewing line managers, our team concluded that the company's real cost of quality was more than double the amount categorized as "quality control spending" on the financial reports. This large disparity was the result of the many inspection, rework, scrap handling, and returns processing functions that were not recorded as quality costs. From our further analysis of current performance we uncovered a piecemeal system characterized by primarily reactive processes that were no longer linked to established process maps and, in fact, that often delayed discovery of product flaws, resulting in the adding of value to already flawed goods.

**Strategy:** Our team developed a coherent, comprehensive quality management program. The key goals of the new approach were to:

- Align quality measures with customer needs and optimal process decision points
- Enable and extend proactive management of quality assurance up and down the supply chain
- Effectively capture and reflect the true costs of quality functions to facilitate decision making

The overall program would consist of 8 separate and mutually reinforcing improvement initiatives in the following areas: vendor certification, product quality standards, preventative maintenance, inspection and testing processes, problem reporting and resolution, warranty processing, quality performance and tracking, and a quality focused incentive program.



To address each area, our team carefully studied the current shortcomings developed specific recommendations and implementation plans. As an example, the warranty process was found to consume 10-12% of all customer service representatives' time. To improve this, a set of decision rules that would tailor the handling of warranty calls to the product type and size of customer requiring service, were developed. Finally, we developed a pilot-testing and training plan for implementing the needed changes in each of the 8 areas.

**Execution:** The client assumed responsibility for implementation of each individual plan. A project "champion" was selected in each functional area to lead the changes and track progress against the goals

**The Results:** After 6 months, we returned to perform a quick checkup and found that many of the recommendations had been implemented, resulting in a significant drop in quality-related expenses.

