

Fixing It Right the First Time Reduces Cost

Situation

Mechanics worked around the clock to maintain a 40 year-old oil refinery's miles of pipes, pumps, and other equipment. Despite the time and effort dedicated to scheduled shutdowns for major overhauls and preventive maintenance, equipment failed routinely. Often, failure was for the same causes and showed the same symptoms. Pump failures were especially high, with as many as 30 logged each month. Typically when a pump failed, the only work requirement was to complete a maintenance work request which did not require an explanation of the root cause of the failure.

The plant's equipment failures contributed to downtime, increased maintenance costs, and reduced overall reliability of the refinery infrastructure. The challenge was to fix things right the first time, every time, and reduce the cost of mechanic rework.

CLG's Solution

CLG's team used Performance-Based LeadershipSM, to help management identify high-impact behaviors of key performers to achieve targeted results. In this case, the ultimate outcome was that of improved equipment reliability. A behavioral assessment was used to specify who performs what behaviors to arrive at consistent performance. Because pump failure was critical, it was the first issue to be addressed. CLG worked with maintenance crews, equipment operators, and managers, to:

- Identify behaviors that decreased mechanic rework.
- Create a process flow diagram highlighting behavioral components.
- Create and coach a Worst Actor Team to gather and share information and quantify results.
- Coach equipment operators to modify reporting behaviors.

CLG worked with the client to develop an Equipment Failure Analysis (EFA) form to document each pump failure. Initially, operators resisted the new forms because filling them out meant more work. But as changes were implemented, the operators saw that their initial time investment yielded big savings in the long term. The equipment was usually fixed right the first time, so they spent less time on rework. These results generated their own positive reinforcement, promoting greater use of the EFAs.



At one of America's largest oil refineries, the CLG Performance Catalyst® process helped to change behavior resulting in critical equipment repairs that were being done right the first time – an improvement that reduced downtime and increased overall equipment reliability, and ultimately, profitability.



Success with reducing rework on pumps led to identifying other areas where CLG's *Performance Catalyst*® methodology could be implemented. The mechanic crew leader identified a number of jobs that constituted mechanic rework. Then, with coaching assistance from CLG, he targeted specific behaviors that were observed and followed up with regular feedback. Most of the mechanic rework was a result of failure to follow procedures, so the process included calculating the percentage of observations where proper procedures were followed.

Results of CLG's Intervention

Pump failures were reduced from an average of 30 to fewer than 10 per month, in only ten months. The rate of completion for the EFA forms rose to 100% from 50%.

The first full month of behavior observations in the other areas revealed that proper procedures were performed 77% of the time. This rose to 100% the following month and remained there the rest of the year.

Other craft areas that required equipment rework, on average twice a month, decreased to zero within four months. All of the improvements were instrumental in making the plant's annual business plan an outstanding success.

About CLG

CLG is a worldwide leader of behavior-based strategy execution and performance improvement consulting that enables companies to achieve lasting results consistently, with speed, precision and control.

Whether your goal is increased growth, reduced costs, better asset utilization, higher customer satisfaction, better use of technology, or overall culture change, CLG can customize a solution based on your specific requirements. We'll then transfer our behavior-based tools and methodologies to you, so you can continue using them to improve performance long after our engagement is completed.

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