

Reducing Costs by Increasing Efficiencies to Stay Competitive

The client was able to increase workforce utilization from a low of 40% to 60% in 4 weeks. This delivered savings of close to \$10 per annum. These changes were achieved using simple Lean tools including spaghetti maps and understanding the difference between work time and value add time.

Background

Our client was a major maintenance contractor for a heavy oil producer near Fort McMurray in Northern Alberta, Canada. They were approached by their customer and were asked to reduce their costs as part of a blanket cost reduction initiative by the customer for all vendors. For this one customer our client deployed about 200 maintenance workers.

Our client was already challenged in profit expectations driven by the market's oil price drop. Some postponed contracts and a commitment to keep a large percentage of their maintenance workers employed was a primary hit to them.

Our client needed to find a way to demonstrate a dollar savings to their customer that wouldn't impact our clients profit margins further, allowing them to fulfill their commitments to their employees and so they brought us in to discuss options.

During our first meeting of managers and maintenance crew representative we spent a day using some simple Lean tools to understand the nature of their work at a granular level. As we talked about what kinds of work was performed at their customer, how it was performed, and the frequency we started to uncover some restrainers of effectiveness. It was through this diagnosis that we were able to suggest a path forward.

The Change

We spent a week on site with our client collecting data about the activities performed (distances, times, re-works, etc.). We gathered data on about fifty different activities performed, analyzed the data into a report, and then shared the results with both management and maintenance teams.

We plotted out the crews duties and mapped their routes using a 'Spaghetti Map Diagram' which highlighted all of the crew's typical bottlenecks.

What we found in the data was that crews were only actually doing work 40% of their day. 40% became our productivity level baseline. Together, management and maintenance workers set a target to increase that productivity level to 70%.

The three biggest bottlenecks identified were permitting time, distance between fueling center and the work site, and the location of the tool crib. We also spent time working with them to understand the work being performed and talked about organizing the flow of work and access to the necessary resources to improve that flow of work (tools, fuel, permitting, etc.).

The conclusion of the day was spent with the maintenance crews teaching them how to standardize their work so that the efficiencies found in one shift could be replicated across all of the maintenance shifts. We also worked with them on a method of optimizing their personal efficiency - making sure everything is where they need for when they need it - called 5S (Sort, Set in Order, Shine, Standardize, and Sustain).

We then came back for one day to conclude this project with our client. We spent the morning quantifying the financial impact of the change to their customer and developing a business case. Our client needed to make sure that their business case was bullet-proof because to generate the expected savings our client felt would be possible, their customer would need to adjust some things as well. The balance of the day we justified the return on this project, a path forward to sustain it, and ways to spread the learnings from this project to other customers our client has.

Results

Our client was able to move their productivity levels from 40% to 60% within 30 days – which is a 15% increase in productivity or, an extra 1.5 hours of maintenance work being done at no extra charge. This would equate to an annual savings of \$9.9 million for their customer. Once seeing the data and potential financial impact their customer was very receptive to the proposed changes and implemented them immediately.