

Reliability Improvements Drive Profit Margins up \$9.8M



Our client, a **leading refining, chemical and biofuels company**, had a major issue with poor performance in the shutdown and major turnaround schedules of one of its' large chemical processing plants. The shutdown and turnaround planning and execution processes were deficient, which led to consistent overruns in planned down-time. Planned shutdowns on average took 134% longer than anticipated to resume production. This underperformance resulted in \$15.7 million in lost variable margin.

We proposed the work to be done in two phases:

- The first phase was an analysis to understand the situation and recommend a path forward
- The second phase was to partner with the client team to implement that path forward

1. The **analysis phase** included evaluation of the current shutdown policies and systems, contractor management, organization structure, current and recent turnaround overruns, and planning and scheduling processes
2. The analysis **confirmed several major areas that were lagging and causing poor performance**:
 - Poor **contractor management and resource utilization** due to the poor planning and communication with operating units
 - **Inadequate use of project planning tools and readiness metrics** to understand when major projects were behind schedule
 - **Management system not structured to drive expectations**
3. In the **Implementation Execution phase**, our team of four subject matter experts managed those areas for 27 weeks. A combination of Lean, project management, defined processes, and data analysis tools were used to drive the improvements necessary to achieve our performance objective: **reduce shutdown and turnaround overruns by 50%**
4. **Partnering with the client** across their functional work teams, and addressing the integration of shutdown and maintenance schedules, allowed us to **better manage the processes through a robust management system**

57%

Improvement from a baseline of 134% average time overrun

15%

Estimated to actuals target for shutdowns and annual turnaround in the coming years

\$9.8M

Overall profit margin impact through improved shutdown and turnaround processes

Reliability improvements helped our client become more efficient during their shutdowns and turnarounds, resulting in less downtime and increased annual production

