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Case Study

The Challenge

A North American multi-site refining client has approximately 20 turnaround events scheduled over a five year period with a budget of ~\$1bn. Their greatest challenge is turnaround (TA) execution and ensuring cross-site consistency. Although they have established cost and duration targets based on Solomon benchmarks, the current spend and timespan still exceed the desired objectives. Some TA work processes have already been updated with a focus on milestones and aligning CapEx work as a key success factor, and a corporate plan has been developed internally. This includes conducting front end loading (FEL) reviews and short impact programs (SIP®), particularly for events that pose a significant loss potential.

In order to support the implementation of a companywide best-in-class TA process, external expertise was sought.

The Solution

T.A. Cook began with a TA process gap analysis reviewing practices at representative sites and comparing them with the T.A. Cook best practice TA Excellence Model.

In parallel, the team conducted TA reviews at selected sites, whose potential for cost and duration target overrun was greatest. These rigorous, forensic reviews cover 15-20 of 25 aspects of TA preparation, dependent on T minus stage. In-depth fact-finding meetings and interviews helped identify and highlight deficiencies that could impact success, while scrutinization workshops detected costly deviations from mandatory scope. Deep dives on work estimates gauged variances to good industry practices and field walk downs shed light on opportunities in logistics and material management. The initial reviews identified a potential deviation of up to 25% from the TA cost/duration objectives.

Recommendations via a SIP® have since been proposed to support the sites to achieve their objectives.

These include:

- » The identification and application of Best Practices into the TA process via T.A. Cook's model,
- » The alignment of best industry standards with CapEx processes,
- » Addressing key areas of weakness and resource bottlenecks,
- » Identifying critical overlaps or gaps, including span of control,
- » Evaluating and assisting in minimizing risks to successful TA execution,
- » Assist the implementation of new work processes and ensure sustainability, and
- » Conducting on the job coaching to develop positive behaviors and promote understanding of and compliance with change management solutions.

In the future, mandatory TA Reviews will be used in three ways: for initial and constant TA improvement; to support the implementation of and compliance with the TA Excellence model; and to sustain and enhance TA performance in cost, duration and safety.

Benefits

These sustainable solutions will allow the client to reduce their TA expenditure and duration across their sites. While the dominant benefit is corporate-wide uniformity in the planning and execution of turnarounds, the ability to drive continuous improvements across all sites by utilizing and measuring identical KPIs with a consistent process is a significant advantage. These actions will provide a re-usable approach towards evaluating turnaround FEL and preparation, so that benefits can be sustained across the entire organization.

Implementation of the recommendations through short impact and long term optimization programs have the potential to generate a 15% – 25% TA spend savings over a five year period.



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