

FALL 2025

Closing the Competitiveness Gap: Benchmarking STO Practices & Performance

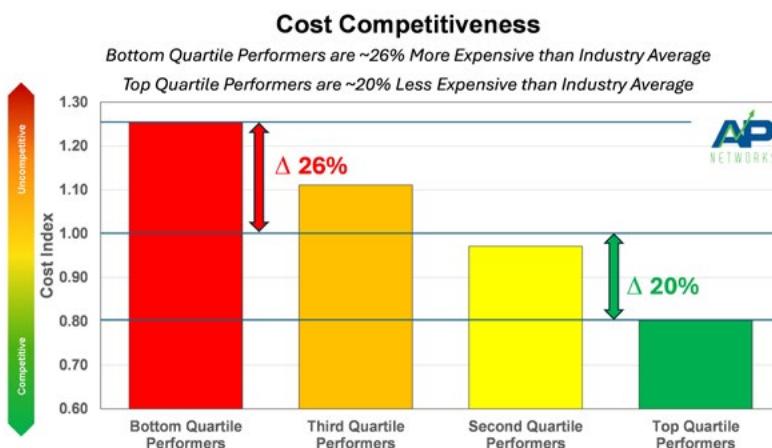


Actionable Paths to Top Quartile

Closing the Competitiveness Gap:

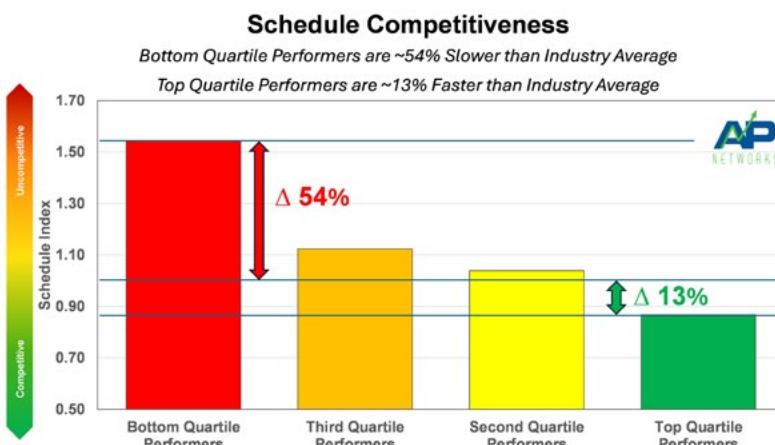
Shutdowns, Turnarounds and Outages (STOs) have faced increasing challenges across industry. STOs typically represent 25 to 50% of total maintenance spend for plants. Organizations achieving top quartile performance on both cost and schedule demonstrate 27% better business value in terms of lower cost and reduced downtime. For many organizations, STO execution effectiveness has been declining, costs have increased, and schedule durations have gotten longer. Yet among this backdrop, some companies and sites have managed to consistently perform STOs well. Given this economic climate, companies are looking for ways to improve performance in order to remain competitive and enter the first quartile of STO performance.

Figure 1 – STO Cost Competitiveness Quartile Comparison (2024)



Looking at STO Cost Competitiveness (Figure 1), STOs have a 26% cost gap between Bottom Quartile and Industry average. And Top Quartile performers outperform Industry average by 20%.

Figure 2 – STO Schedule Competitiveness Quartile Comparison (2024)



Even worse, Schedule Competitiveness (Figure 2) results show STOs have a 54% gap between Bottom Quartile and Industry Average.

How Bad Is It?

The difference between average Bottom Quartile to average Top quartile performances are glaring

- STOs have a 46% gap in Cost Competitiveness
- STOs have a 67% gap in Schedule Competitiveness

How Do We Close The Competitiveness Gap?

Common questions we encounter from our clients are:

- We want to improve, but where do we start?
- What solutions should we focus on?
- How can our facility achieve top quartile performance?
- How do we establish a legitimate, actionable, and sustainable plan to reach our goals?

Case Study: How To Close The Competitiveness Gap?

Evaluating your organization's STO performance and associated preparation and execution practices relative to industry is the key to understanding how to achieve predictable, competitive STO outcomes. A recent analysis of a client's STO performance used Key Performance Indicators (KPIs) and competitiveness metrics benchmarked against industry standards. Utilizing AP-Networks' proprietary Turnaround Scope Index (TSI), we conducted a detailed review of scoping practices and quantified the event scope. By establishing the site's performance relative to the industry and the top quartile, overall event and unit-level metrics—such as schedule, cost, operability, scope, safety, and environmental factors—were quantified, highlighting areas that required further attention. An actionable plan was then developed and agreed on with stakeholders to form a **Credible Plan to Top Quartile**.

Figure 3 – STO Cost Waterfall Analysis: shows largest contribution to high cost was significantly higher than average scope.

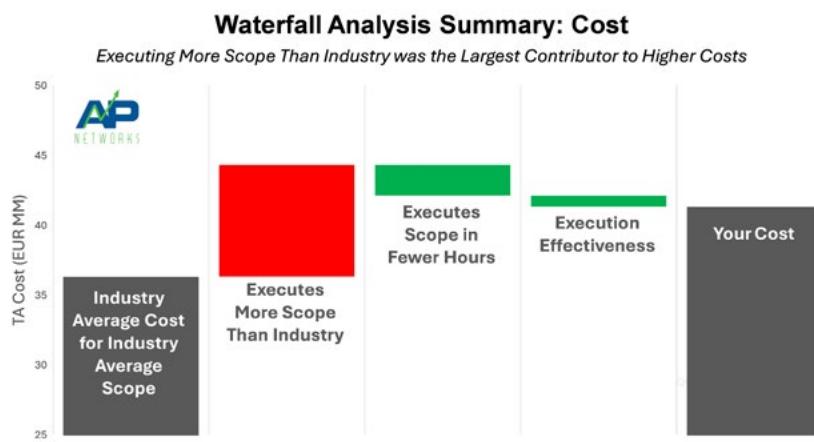
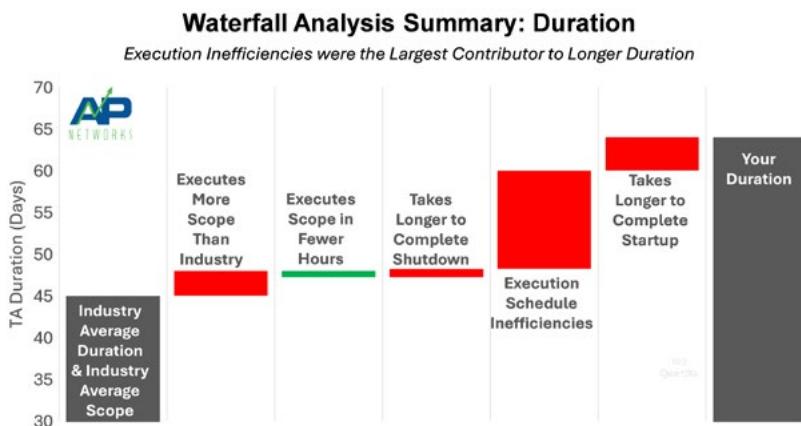


Figure 4 – STO Schedule Waterfall Analysis: shows largest contribution to longer duration was execution inefficiency.



Benefits

- Delivers detailed analysis and background of each area of opportunity
- Recommended actions are supported by empirical evidence from all phases of the process:
 - Data Study
 - Benchmarking
 - Onsite Analysis
- Rapid delivery of results
- Discussion with Leadership Team on implementation and timing

Closing the Gap Starts with Measuring the Gap

A simple two step approach:

1. Measure performance and measure the problem: determining quartile performance relative to the industry average and the gaps to top performers
2. Analyze STO practices employed by the organization: focus on where those gaps lie

Our Unrivaled Dataset Provides Unparalleled Insight

Data To Drive Better STO Outcomes

The AP-Networks Turnaround Database is the world's largest and most comprehensive STO database, containing observations from thousands of unique STO events. This database includes information gathered from more than 130 marquee companies and over 500 sites throughout Asia, Africa, Australia, Europe, the Middle East, North America, and South America. Operators from the onshore and offshore upstream, gas, refining, chemical, and power industries are represented.

The AP-Networks Turnaround Database contains information on planned and actual STO outcomes, key characteristics, and preparation and execution practices that are correlated with outcomes. Our data analytics gives us insights into the causal factors behind success and failure and allows individual STOs to be benchmarked against Industry average and top quartile performance. These analytics allow us to identify the demonstrated practices that lead to successful outcomes.

A Credible Plan to Top Quartile

An Actionable Approach

We will collect data on recent STO events through our advanced digital platforms, ensuring comprehensive and accurate information. To gain deeper insights, we will conduct interviews with key stakeholders at each site, focusing on the effective practices they employ. Our team of world-class experts, supported by AI analysis, will thoroughly evaluate the data gathered to identify trends and actionable recommendations.

About Us

Asset Performance Networks, LLC, the trusted leader for improving asset and operational performance in petroleum, chemical, and energy companies worldwide. We work with our client's most critical assets: their people, processes, and production facilities.

For More Information:

Asset Performance Networks

www.ap-networks.com | www.turnaround-network.com

Database Highlights

- Over 2,600 STO Events
- Over 130 Marquee Companies
- Over 500 Sites
- Global Dataset

Proprietary Analytical Models

- Utilizes Machine Learning & AI
- Enables us to forecast outcomes early in planning stages
- Based on inherent complexity & risk factors
- Allows teams to understand risks and take actions to mitigate



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