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Construction and
Engineering

Driving Efficiencies Throughout Your Shutdown, Turnaround and Outage Event

It's a fact of life that assets need to be taken offline occasionally for maintenance or to improve processes. Some companies even plan for it months if not years in advance. Yet 68% of organizations still don't deliver these shutdown, turnaround and outage (STO) events on time. What's more, these maintenance projects that are meant to improve efficiencies are having the opposite effect when delays lead to lost revenues in the form of production loss, shareholder value or non-compliance with regulators.

The Need for Business Transformation

STOs require an enterprise project portfolio management solution that is as robust as those used on other major projects in your enterprise. For instance, when planning an STO event, organizations have primarily focused on scheduling of the shutdown to minimize the impact on revenue. But there are other equally important factors to consider to ensure that an STO event is delivered on time and on budget.

Organizations need to fully understand the scope of the event, including the daily costs, the procurement plan, purchase lead times, the resources needed and contractor requirements. They must also be able to manage project changes throughout the event.

This solution brief will explore how to transform the efficiency of your STO and solve business challenges in six key areas with Oracle's Primavera Shutdown, Turnaround and Outages Solution.

SCOPE CAPTURE, CHALLENGE AND APPROVAL

Half of all organizations fail to establish a project scope that details what has to be accomplished during the execution window. The lack of an approved scope can increase the final cost and completion time by more than 10%.

An STO solution provides an automated process where all stakeholders can propose the scope of the project via standard forms, document capturing and even photos to support its inclusion within the STO event. This scope can then be consolidated and re-circulated to SMEs for their comments. The final scope can be approved via an automated process to ensure all management stakeholders have complete buy-in.

SCHEDULE AND RESOURCE OPTIMIZATION

It's no surprise that scheduling and resource planning are the primary focus areas when managing an STO event. Organization must anticipate production loss during the asset's downtime. Organizations that have adopted planning and scheduling optimization solutions have seen a 3% improvement in STO project completion times from shutdown to startup.

Speeding Shutdown to Startup

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Assuming a 1-month STO timeframe, this improvement can drive an additional $1 million in revenue due to the shorter completion times.

Schedule management capabilities in an STO solution can estimate and monitor an activity's duration down to the minute, if required. It can also manage and optimize resources in the schedule so that tasks are completed in the shortest time possible.

Some STO events are driven from work orders that come from other enterprise resource planning systems such as Oracle, SAP, Maximo or Passport. In those cases, an enterprise asset management product is critical to support interoperability with those tools.

STANDARDIZED PROCESSES AND DOCUMENT CONTROL

Throughout the lifecycle of an STO event, hundreds of documents move through an organization for review and approval and often through very manual processes. This often leads to significant inefficiency from all parties involved in executing the STO.

Organizations that have adopted collaborative document control that is accessible by the whole team have seen individual efficiency improvements of up to 20%.

By automating an organization's manual processes, contractors and suppliers are better able to collaborate, handle project escalation and ensure that best practices are adopted throughout the organization and across all the STO events.

With collaborative document control, any type of document or image – from a CAD drawing to a Word document – can be routed through the process. Reviews are captured via redlines, for instance, without the need for the native application. Documents also can be accessed via the hierarchical structure of the document repository, the ultimate destination of any document.

STREAMLINED EXECUTION AND REPORTING

During the execution of an STO event, speed is of the essence both in terms of the ability to capture field status and the ability to provide reports after each shift to understand the current progress and the impact on the event. Capturing this data from the field is often very manual and requires significant data manipulation to provide reports that keep the project moving efficiently.

Visionary organizations are 70% more likely to adopt real-time data capture and automated reporting because they understand the benefits it provides.

Mobile technologies, a major driver of real-time data capture, are being adopted more frequently in STO projects. Mobile resources help workers in the field better understand the activities they are assigned to do and the materials and equipment required. Workers can also update the status of the project on mobile devices as activities are progressing, enabling the schedulers to continue to optimize the plan effectively for the next shift.

With near real-time status from the field, stakeholders in the STO event can receive timely information in reports that have drill-down capabilities, allowing executive management to bring in more resources or issue addition supply contracts, for instance, and stay on schedule.

On the Same Page

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COST CONTROL

Cost is often seen as the least important component of an STO event, but this is changing due to the current economic climate. Organizations are now looking to manage cost as efficiently as they manage their top priority, scheduling. Organizations that have effectively managed costs throughout the STO lifecycle have improved cost overruns by 12%.

A comprehensive STO solution allows organizations to manage costs on an STO event down to the day so that at any point in time the organization know the estimated time to completion and estimate at completion. It also lets cost engineers manage all aspects of cost, including budgets, commitments, actuals, changes and trends, in a simple Excel-type solution. This is done through formalized processes to ensure overall governance. What's more, costs are linked to the schedule, which reveals a true cash flow forecast.

CHANGE MANAGEMENT

Changes happen, but often they are poorly managed across an STO event with no formal process to standardize how those changes are captured and subsequently managed, leading to changes in scope, design or cost for the supply chain. Only 35% of organizations employ a closed-loop process where the full lifecycle of a change is managed collaboratively and taken into account during the STO event, not afterward.

An STO solution allows project teams to manage change through a standard automated process, both post scope-freeze and during the execution window, from either internal departments or the supply chain. It can capture the change's impact to cost and schedule, and provide any supporting documentation. Change requests can even be routed through an approval workflow to ensure governance.

Standardizing and capturing the change management process helps mitigate changes in scope for the supply chain. Future STO projects can benefit from the detailed analysis of the entire STO event that was captured in the STO solution, providing valuable lessons learned.

CONCLUSION

Understanding STO events are a core part of your business. Oracle's Primavera Shutdown, Turnaround and Outages Solution has been developed to support the transformation of your STO business by proving a predictable solution that supports scope, cost, schedule, risk and change throughout the STO event lifecycle. Become a leading organization that delivers STO events on time and on budget.

Controlling Costs

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