Keeping Projects on Track

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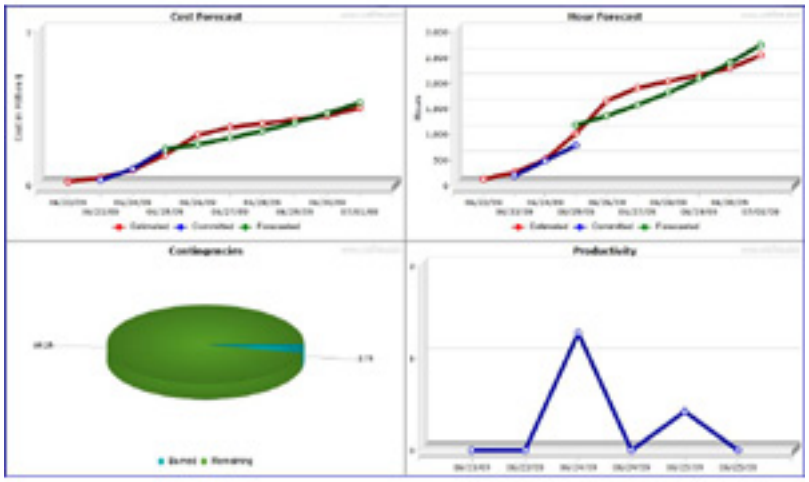

Completing chemical plant turnarounds, construction and routine maintenance activities on time and on budget is an elusive goal for most process industry manufacturers. According to industry lore, a staggering 85 percent of North American turnarounds are completed late and/or over budget.

One of the key deficiencies is the lack of real-time visibility into contractor activities and costs. With hundreds or thousands of contractor craftsmen working on site on any given day, it’s impossible for owners and contractors to stay on top of individual craftsman hours, activities and costs using traditional manual methods — paper timesheets and spreadsheets. Project teams are typically in the dark regarding a project’s current (right now!) status — when will we complete the approved scope of work and what will the total cost be. An abiding lack of visibility makes it difficult for them to react to ever-changing requirements, or identify and address new demands before they delay the entire project (and your bonus).

There is a “culture of performance” at leading chemical plants and other process industry manufacturers. You can see it everything they do: OSHA safety awards, industry-leading profitability and top ranking in industry metrics. Here are some of the best practices used by project teams at these plants:

Establishing and monitoring maintenance, turnarounds and capital project key performance indicators (KPIs). Project teams constantly evaluate real-time information from automated contractor cost management systems. This system is

integrated with CMMS, scheduling and badge in/out access control systems. Best-in-class manufacturers are using these real-time metrics to effectively manage costs and support spur-of-the-moment decisions.

Key metrics to measure include: planned vs. actual real-time headcount by contractor (vendor)/skill/shift; alerts of labor and equipment “no-shows;” equipment and materials used by contractors each shift; cumulative hours and costs at the purchase order (PO), work order (WO) and activity level; planned vs. actual variance reporting of interim and final costs; and POs and WOs that are approaching planned cost and hours limits. This provides a single version of the truth. Sharing information and alerts, owners and contractors collaboratively get the job done.

Achieving daily cost transparency through automation. Cutting-edge plants are taking analytics to the next level by achieving “daily cost transparency” — real-time information available at the end of each day that reports the status of activities performed by contractors and associated project costs. The hours and costs can then be allocated to purchase orders or work orders so the project has a next-day update of actual hours spent and costs.

These burned hours can be automatically forwarded to a planning and scheduling system(s) so everyone is aware of activity status, how much has been completed, and the latest estimate of project total cost and duration is calculated. This information enables project and plant management to make informed decisions “on the fly” based on actual project status. It also eliminates payment disputes, and facilitates accurate and timely payment to contractors.

Streamlining and standardizing business processes. Streamlining and standardizing core processes, like contract terms and conditions, shift scheduling, work hours and time-keeping and invoicing, enable owners and contractors to work efficiently and better manage all aspects of the project. Processes to consider standardizing include: implementing standard contracts with localized commercial rates; developing standard contract commercial terms and conditions templates; using consistent nomenclatures and definitions for labor skills and qualifications, equipment and materials.

Implementing smart contracting. Contracts should be guided by the company’s

current contracting strategy and match project risk to contract types. For example, it's effective to use lump sum contracts when there is a well-defined project scope; to use unit rate contracts to improve productivity and control costs; and to use time and materials contracts when the project scope is flexible.

Integrating systems. Sharing data across different systems is important for visibility, efficiency and communication. For example, in addition to access control systems, contractor cost management systems should integrate with CMMS (computerized maintenance management software) and ERP systems to enable accurate and timely payment.

Project teams can keep construction, turnarounds and maintenance projects on track by implementing best practices and automating contractor cost management. As experienced by "culture of performance" chemical plants, the visibility that can be achieved enables more informed decisions when managing ever-changing circumstances, and help bring projects to a successful completion — on time and on budget. Everyone wins.

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