Critical Engineering Group Simplifies Project Management, Completes 89 Days of Work in 60

**Challenge**

Meet precious project windows or risk millions of dollars in penalties

As the Computer and Data Management (CDM) arm of FMC, a leading provider of oil and gas industry field technology, the CDM’s team of 400 engineers was responsible for more than 40 projects at any given time, each an indispensable part of a larger obligation to deliver a complete oil field platform for a project, Knarr, in the North Sea’s Norwegian waters.

Given the complexities of oil platform design, no two projects were alike and required, therefore, extensive custom designs and components. Despite the complexities, however, every element had to be in place to meet previously scheduled installation timeframes; failure to meet the window could postpone installation by years—and cost FMC upwards of a $1 million/day in contract penalties. Current project management processes could not keep pace with the workload, leading to delays, resource commitment conflicts and destructive tensions among managers competing for their project priority.

**Solution**

Implement a streamlined Critical Chain Project Management (CCPM) Process

To reduce time-wasting multi-tasking and eliminate resource conflicts, Pinnacle Strategies led the CDM team in a Critical Chain Project Management Process that allowed engineers to concentrate their efforts on one task at a time, while giving managers precise control over the entire project workflow. Implementation involved:

**Probabilistic Project Scheduling** that set a delivery date based on the highest probability of completion, while allowing for variation in execution.

**Placement and Use of Buffers** instead of allowing “safety guesstimates” on task completion times, CDM based estimates on net task durations, then created a collective time buffer that could be distributed to any resource or task as needed.

**Constraint Identification** progress can only be as fast as the slowest task in the sequence, the “bottleneck.” Identifying the bottleneck enables CDM to forecast reliable completion dates and direct resources to the bottlenecks where they were most needed.

**Results and Benefits**

**Completed 89 Days of Work in 60**

**Significantly Reduced Schedule Risk**

**Increased Focus and Attention** on priority tasks that contributed to overall project goals

**Created Ability to Run Rapid, Dynamic and Time-Saving “What-If” Analyses**

**Demonstrated Ability to Pinpoint and Resolve Bottlenecks For Entire Department**

“Pinnacle consultants are highly effective and professional. Even our seasoned managers learned new methods and approaches to solving problems.”

—Delivery Manager, FMC Technologies