Project: Statoil program

Located in Calgary, the scope of the project was extracting and refining oil from the oil sands. The project has been divided into two scopes: Statoil Reduced Liquid Discharge (RLD) Leismer, SAGD and Statoil Steam Debottleneck (SDB) Leismer Acceleration Phase 1.

Status of project: Work-in Progress

Client: Statoil

Statoil, a New York and Oslo stock exchange listed company, is into accommodating the world's energy needs in a responsible manner along with applying technology and creating innovative business solutions. Statoil has 35 years experience from extracting oil and gas on the Norwegian continental shelf and is currently operational in 34 countries.

Contractor: CH2M Hill

CH2M HILL is a global leader in consulting, design, design-build, operations, and program management for government, civil, industrial and energy clients. The firm's work is concentrated in the areas of water, transportation, environmental, energy, facilities and resources.CH2M Hill, Calgary was established to concentrate on expansion in the energy and chemical process.

The need for Wrench:

The contractor wanted a project management and progress monitoring system that could be integrated with their existing methods. The system should be able to not only plan their deliverables but record and evidence the accurate progress. The contractor was planning with Primavera, updating the progress with MS Excel and managing their document with ProjectWise.

Deliverable Management before Wrench

Project activities are planned and listed in MS Excel. The planned end date of each activity is based on an estimate of the man-hours needed to complete it. Once the activity has started, the lead engineer informs the planning engineer an estimate percentage of the work completed. This percentage was converted to man-hours and compared with the planned dates. A major bottleneck was getting inputs from the site and providing reports for the clients based on these inputs

Deliverable Management after Wrench

Wrench Enterprise was introduced in CH2M Hill as an engineering deliverable management tool. Wrench provided them a platform that could

- provide a real-time progress monitoring system
- enforce quality from a robust document management system
- interoperability with their existing software

Impressed by Wrench Enterprise management for engineering deliverables, CH2M Hill wanted to see if the same can be extended for monitoring construction and procurement deliverables. A detailed study was conducted and a plan was made for their requirement

A project is divided into Engineering, Procurement and Construction packages. Each of these packages will be further divided into sub-packages based on the disciplines. These sub-packages will have the list of activities where the progress will be recorded.

In the **Engineering package**, the total list of drawings are exported into Wrench Enterprise with its in-built feature for importing and assigned to activities. Since each drawing/document goes through a set of activities from its creation to issue to site, milestones are created based on each stage. As each milestone is completed, the system captures the end date and updates the progress percentage.

In the **Construction package,** a plan activity and actual activity is defined. Plan activity was recorded based on the quantity to be achieved in a week. Since the unit of measure of each activity (metres of pipe, number of bricks etc.) varied from each other, each activity unit of measure is converted into man-hours with a conversion factor. As each activity progressed, the actual quantity achieved is entered. The man-hours generated by the system, from the actual quantity achieved, are compared with the planned man-hours and thus progress measured.

The **Procurement package** followed the same process as the engineering package. Each item to be procured is assigned to an activity. Progress is planned based on the stages. As each stage is completed, the system captures the end date and updates the progress percentage.

Real-time SQL based reports and S-curves, are used to predict whether the project will be delayed or is on-schedule.

Additional features

- Windows like storage procedure for documents
- Documents stored with its meta-data
- Older revisions and versions stored in a centralized location
- Safe storage of completed documents in vault
- Correspondence management help to organize emails, letters, faxes and MOM's better
- An in-built tool to bulk update progress, recorded in MS Excel, directly to Wrench

Implementation process

1. Size of wrench implementation team

   - One project manager – onsite
   - One Implementation engineer – onsite
   - Two support engineer - offsite

2. Size of coordination team from the client for wrench implementation

   - Three

3. Time taken for deployment

   - 3 months

4. How was the training given to all users?
   - Onsite training based on the category of the person.