

BUSINESS SCENARIO:

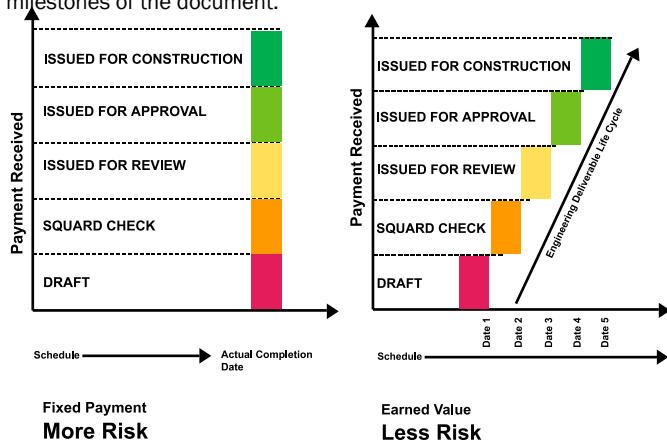
DERISK YOURSELF BY PRACTICING EARNED VALUE METHODOLOGY

Earned Value Project Monitoring in Oil and Gas Sector

Project managers use real-time Earned Value Analysis (EVA) in the project execution phase of large scale development projects deployed in the Oil and Gas sector where project stakeholders (customers, internal planning departments, internal customers, project managers) would like to insulate themselves from changes during the course of the project with respect to agreed terms. Earned Value Analysis is an important component of effective project management, and one that has gained widespread acceptance over the past decade. Using EVA, project managers can measure and manage progress objectively, compare planned cost to actual cost, and compare planned schedule to actual schedule—all in more meaningful and actionable ways. They gain vital insight into the success and risks of a project during execution, while there is still time to take corrective measures.

HOW DOES EVA WORK?

Unlike Fixed payment where the client pays based on the billable man-hours spent on the completion of the deliverable + X%, earned value method is used to understand the effort spent by resources during various milestones of the document.



To derisk themselves the contractee in our case the designer/ consultant would further break his activity(designing) to smaller activities using milestones. Milestones are measurable events. In the case of design the milestones are

- Drafting(10%)
- Internal Approval(Squad checks)(30%)
- Issued For Review (50%)
- Issued For Approval (70%)
- Issued For Construction (100%)

HOW TO PRACTICE EVA?

- **Defining the project scope:** The most critical requirement of preparing for EVA is defining the project's total workscope. A comprehensive scope that represents 100% of the planned work provides the basis for measuring the project's performance in a definitive way. The most efficient way of outlining a scope of work, especially for complex projects, is with a Project Work Breakdown Structure (PWBS). A PWBS is a hierarchical outline of the scope that defines tasks down to the most practical level of detail. Used as the basis for EVA, it becomes the roadmap for analyzing the project's progress and performance
- **Allocating Budgets and Resources to Project deliverables:** The next step of preparing a project for EVA is to allocate budgets to every element of the PWBS. This step typically includes assigning resources, so that the budgets reflect the costs of resources needed for each sub-project and task.
- **Measuring Progress of Deliverables:** Before work gets underway, the project manager must be ready to collect data on the progress of each task in the PWBS.

CHALLENGES IN IMPLEMENTING EVM PROCESS

For organizations implementing an Earned Value Analysis for Project Monitoring, the challenges are

- In developing a robust baseline as soon as possible after contract award. The planning process must identify all major project deliverables clearly. The project should be broken down into individual tasks with assigned resources and budget.

- Defining an accurate mechanism to measure the actual percentage of progress of each task .Objective measures of progress must be assessed routinely . Engineering processes is cyclic in nature. The deliverables will go through different submissions and will undergo many revisions. Tracking the deliverable progress and capturing real time data required as input for the EVM process through manual systems are painstaking.

The three key EVA metrics on the task:

Budgeted Cost of Work Scheduled (BCWS): The projected cost of the task from the Project Work Breakdown Structure.

Actual Cost of Work Performed (ACWP): The dollar amount spent to date, to perform the work that has been completed to date.

Budgeted Cost of Work Performed (BCWP): The dollar amount that was planned to be spent to perform the amount of work that has been completed to date.

The input required for calculating the three metrics are:

Input for calculating EVA metrics	Source
Planned Task	Defined in the WBS
Rate	Defined as budget defined in the wbs
Hours Logged	Derived from Timesheets/manual tracking mechanisms
Days elapsed	Derived from Timesheets/EDDR reports that are manually updated
Estimated time to complete	Approximate Estimate made by the Resource
Status Report information	Manually updated

PRACTICING EVM THROUGH WRENCH

Earned Value management was not developed simply to report status to customers - it may be used in this way, but if this is the only way it is seen, a huge degree of the value of using the method will be lost. With Wrench the Earned Value Management may be incorporated into the practice of daily management of the project, leading to an improvement in decision-making based upon an informed analysis of real status against cost and schedule goals, at the working levels of the project.

Wrench addresses the challenges of Earned value management by:

- **Providing a mature and robust framework for EVM:** Executing a project in Wrench automatically enforces that there is a clear definition of deliverables. In Wrench the project is translated into tasks. Deliverables can be attached to individual tasks and the allocated budget and schedule is also defined for each task.
- **Automatic capturing the input required for EVA:** As the project progresses the man hours consumed in real time is captured automatically by the system thereby enabling time phase aggregation of resources. Engineering processes are cyclic in nature. The deliverables will go through different submissions and will undergo many revisions. Tracking the deliverable progress and capturing real time data required as input for the EVM process is automated in Wrench.

Input for calculating EVA metrics	Source: WRENCH
Planned Task	Defined in the WBS
Rate	Defined in the WBS
Hours Logged	Automatically captured
Days elapsed	Automatically captured
Estimated time to complete	System generated estimate based on data
Status Report information	Automatically captured

- **Timely Generation of Reports required for EVM:** System generated Reports may be generated to routinely measure the percentage of progress of each project deliverable. Compiling reports stating the status of the huge number of deliverables is automated ensuring accuracy and is resource independent.

