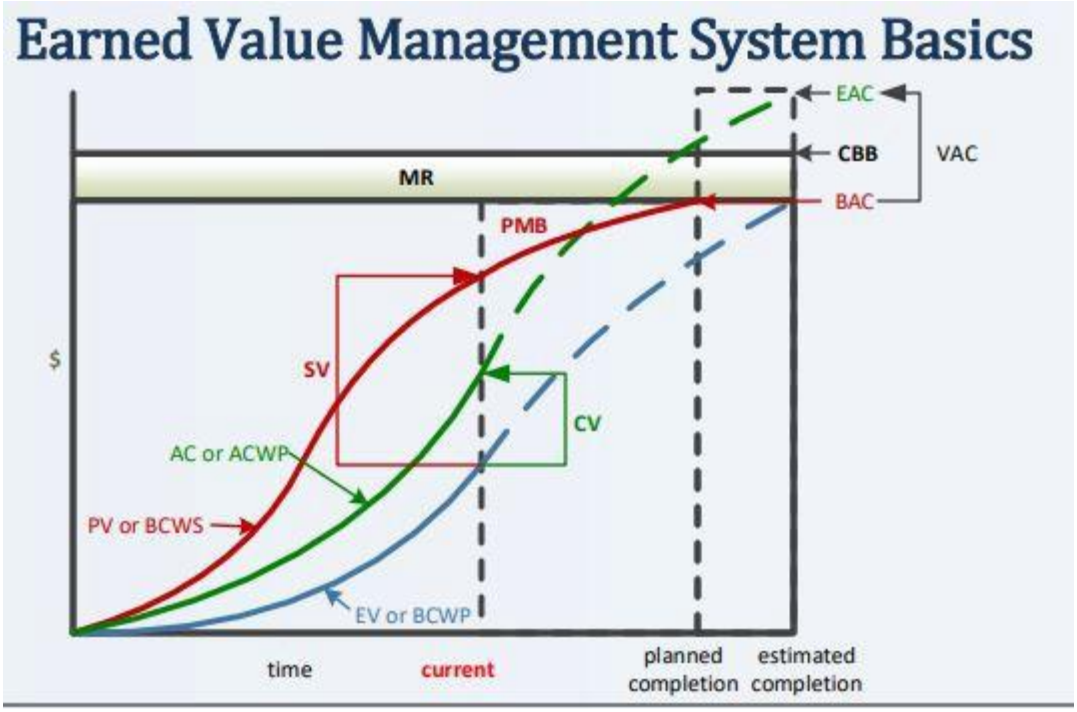
EARNED VALUE



What does "lean" mean in terms of project execution to you and your organization?

How does one get the best value from project performance information to better manage the additional risk that lean execution brings to Engineer-Procure-Construct (EPC) projects?

A prime example of an index's vulnerability to false reads is the standard Earned Value index for schedule progress and performance, known as the Schedule Performance Index (SPI). SPI, as it is commonly calculated, can lead to false indications, both negative and positive.

There is still not a completely reliable metric for accurately measuring schedule performance. This is due to all these techniques being dependent upon the accuracy of the Performance Measurement Baseline (PMB) and thereby the estimate and schedule that was used in its development.

In addition to the PMB issues, current schedule performance indices may also be affected by masking from subjective rules of credit (ROC) such as the use of supervisory judgment, and strategic manipulation by supervision of actual progress (by working non-critical tasks to gain earnings).

The solution is a balanced approach to both frequency and effort that yields more focused and accurate results.

Major challenges

1. Based on Budgets: Budgets are developed from estimates with varying levels of definition and accuracy, affecting cost performance indicators throughout the life of the project and resulting in unrealistic schedule durations.

2. Incomplete Requirements or WBS: It´s the key project plan document. Without a complete WBS or requirements, the schedule and budget will not accurately reflect what it will take to successfully complete the project. Standard WBS is key for process integration.

3. Plan Not Integrated: People preparing the schedule and estimate are involved in the WBS preparation and are in alignment with providing the budget and schedule to match the WBS elements.

4. Incorrect Progress: The manipulation of progress can also have a masking effect. This occurs when resources are utilized to accomplish work out of sequence or that is less schedule-critical, in order to gain enough earnings to show that summary work element as being on schedule. An example is working construction specifications early to replace a more schedule-critical design requirement such as the plot plan. The net effect is a perceived on-schedule progress indication yet the risk critical deliverable is not progressing to completion, resulting in a domino effect on downstream work.

5. Change Orders: The performance indices, primarily CPI, become inaccurate when change management processes are not rigorously applied. One of the primary functions of change management is to delineate scope driven changes/impacts from performance impacts, so that each may be managed and mitigated effectively.

6. Maturity: If your organization is not at least a level 3 maturity level, you should not be using earned value.

7. Clear workflow and process mapping.

8. Use a strong matrix organization.

In summary, these eight measurement issues preclude the Earned Value Indices from telling the project's true story.