

Five Common EVMS Misconceptions

For companies exploring a potential contractual need or competitive desire to implement an Earned Value Management System (EVMS), there are a host of misconceptions that frequently surface about earned value management (EVM) and implementing an EVMS. For anyone new to EVM, there is a certain air of mystery about it – EVM can appear complicated and hard to do. There is no doubt that implementing an EVMS requires management commitment and concerted effort to succeed. The whole point of an EVMS is to provide reliable, timely, and actionable information that can be used to manage a project more effectively. The trick is not making it more difficult than necessary.

What are some common misconceptions about EVM and EVM Systems? The following is a short list of some of the frequent misconceptions Humphreys & Associates consultants encounter along with some observations to help dispel them.

1. Install software, have EVMS.

False. Implementing one or more software toolsets to assist in the EVM process always helps, but it is just one component. An EVM System is more about instilling a disciplined and repeatable process for managing projects. That process will need to integrate all of the project control subsystems such as work organization, planning and scheduling, budgeting, accounting, work performance and analysis cycles, estimating what it will take to complete the remaining work (in time and resources), and managing changes to ensure the process provides reliable information from project inception to completion.

The people using the project control system are another critical component. The goal is to create an EVMS that all project stakeholders including upper level management, project managers, integrated product team (IPT) leads, control account managers (CAMs), and others actively use as a normal part of their day-to-day routines regardless of the toolsets the company uses.

The right software tools can certainly make it easier to implement an EVMS. Merely implementing software without addressing the process does not address the issue. Implementing a disciplined process that people use does.

Beware of those who suggest that implementing a software toolset equates to an EVMS. In some instances the incorrect application of software, or software that claims to do more than it does, hinders the EVM process and can create issues with a government customer EVMS review team. Classic examples include the inability to fully integrate the schedule and cost data or the software produces Contract Performance Reports (CPR) formats using an outdated Data Item Description (DID).

2. An EVMS prevents budget overruns or schedule delays.

Unfortunately, this is a common misconception of both contractors and government program offices.

Properly used, an EVMS is an early warning system. It provides the means to identify issues early and proactively address them before they impact the ability to meet contractual requirements whether technical, schedule, or cost. Knowing how to identify risks and opportunities is an integral part of an EVMS. It is essential that managers at all levels know

how to use the information the EVMS provides to respond quickly to deviations from a baseline plan. An EVM System is a useful management by exception tool. Project managers can manage the work effort with less stress, because they can focus on critical or problematic work elements.

When a baseline plan is unrealistic or does not take into account likely risks to the project, implementing an EVMS will not prevent an overrun or schedule delay. It will, however, highlight where the baseline planning was inadequate and which work elements require management attention to make the necessary adjustments for the remaining work effort.

3. Variances are a bad thing.

This is another common misconception of both contractors and government project managers. The bad part of this misconception is that it causes people to unwisely hide schedule or cost variances or to produce rosy estimates at completion (EACs) until an unpleasant surprise surfaces (i.e., the bad news cannot be hidden any longer). Hiding variances negates the whole purpose for implementing an EVMS. This is one of the reasons EVM gets a bad name. The EVMS is used improperly and then becomes the culprit when management or the customer is blindsided.

Variances are the early warning mechanism of an EVMS. While most projects endeavor to produce a reasonable and executable baseline plan, what actually occurs as the work is performed will deviate to some degree from the plan. Consequently, the performance variances provide the ability to quickly identify deviations from the plan and determine the impact to the project. That means management can take the appropriate action to minimize the impact. This analysis provides fact-based information that can be provided to the customer about issues that are surfacing, what the impact is to project, and the actions being taken to minimize the impact. This instills confidence in the system, because the contractor demonstrates it knows how to actively manage the work effort.

Variances and performance indices also provide an indication of the quality of the baseline planning process or how realistic the baseline plan was from the onset. It may be that the proposal and/or baseline basis of estimate or scheduling process needs additional work to produce better baseline plans for future projects. It highlights an opportunity to improve that initial planning process.

Conversely, a good estimating or baseline process can result in small deviations in variances and performance indices as project work effort is completed. At completion performance indices can be cited in future proposals as evidence of a company's ability to effectively plan and manage projects. These indices also validate the underlying basis of estimates when planning similar projects in the future.

4. An EVMS is too rigid, requires too much detail.

This can be true in those situations where the EVMS implementation process was not thought out or tailored to the environment. An EVMS does not inherently require more detail. A common error made by companies new to EVM is to drive the data down into too much detail. This over complicates the planning and scheduling, budgeting, performance measurement, analysis, and change control processes.

What EVM does require is a defined logical approach to produce technical, schedule, cost, and risk data that are fully integrated. This is necessary to summarize the source detail data to various levels or to drill down into the data to perform root cause analysis. That means more upfront planning is required to determine a reasonable level of detail to manage the work effort based on risk and other factors for management visibility. It also means defining

a useful coding approach to organize and integrate the data. This upfront effort quickly pays for itself because it provides the means for the EVMS to highlight work effort that is deviating (positively or negatively) from the plan and for management to take appropriate action.

EVMS most certainly adds a level of discipline to the project management process. This is necessary to implement a repeatable process that can be described and demonstrated – this is similar to goals of the Capability Maturity Model Integration (CMMI). An EVM System is a structured collection of effective project management practices as defined in a company's EVM System Description. Projects use the same effective practices (the System Description) along with needed project specific directives to match the project's needs or contractual requirements. Implementing and effectively using an EVMS demonstrates a higher project management maturity level.

Whether or not someone translates a repeatable process as being too rigid is a subject for debate. In some instances, the "too rigid" label is a result of self-induced pain. The EVM System Description should provide a foundation of sound practices that all projects are expected to follow so that a common set of performance metrics can be captured for companywide project portfolio analysis. Project directives can be used to further define how those practices are applied to a project based on the scope of work, type of contract, duration, risk, and other factors. This provides the ability to tailor or scale the EVMS as needed and yet ensure sound, effective practices are being followed.

What is easy to forget are the hazards and business risks related to ad hoc processes or project management by heroics. Typical results of ad hoc processes: regularly failing to meet objectives (overruns, late deliveries, last minute scrambles to the finish line), lack of management visibility into the real status of the project (which results in unpleasant surprises), quality issues that result in rework or unhappy customers, and high frustration levels (is anyone in charge?).

The important point is that the principles of EVM can be used on any project to improve the management and control process.

5. High cost to implement and use an EVMS.

Or the corollary to this is that EVM provides limited return on investment. This is a common argument about any new process that is introduced. An EVMS may be a new contractual requirement for a company. To win the business, an EVMS is required. That immediately determines management's commitment – either implement or decline to bid.

There certainly is a price tag for implementing new processes. The difficult part is determining the delta between what a company is currently doing compared to those practices noted in the EIA-748 32 Guidelines. It may be a narrow or large gap. Having an experienced independent third party conduct a gap analysis is one means to capture fact-based information about the current state of a company's project control system and project personnel's EVM knowledge level. This can provide a basis to determine what it will take in time, resources, and cost to close the gap. This can also help to perform an internal cost/benefit analysis.

What is sometimes missed is that EVM is really a set of proven project management principles that can be applied to any project. It can improve the ability of a company to meet commitments, increases management visibility which helps to prevent expensive surprises, and demonstrates a higher level of project management maturity that can be used to a competitive advantage. All of these factors can reduce the overall cost to execute projects and, in turn, increase the company's profit margin.

Yes, there is a cost to implement a disciplined project management process. A company's management team must make the decision to fully embrace EVM (a cultural change) or not. There is a much higher hidden cost for ad hoc project management practices that is harder to capture and measure and thus easier to overlook as it is business as usual. There are also significant costs incurred should a government customer decide a company's project control system is not up to the task or is not being implemented properly. That typically means an emergency response team has to be brought in (whether internal or external) to resolve issues that could have been averted with proactive upfront planning, and avoid a loss in credibility and goodwill with the customer. Unfortunately, some companies learn that the hard way when senior management is not fully committed at the start.