



## TenStep Supplemental Paper

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### **Some Environmental Factors are Required to Successfully Implement Earned Value**

Earned value was a way to measure the progress of a project with greater precision and accuracy than is typically available. The primary units of measure are the Budgeted Cost of Work Performed (BCWP) (which is also called the “Earned Value”), the Actual Cost of Work Performed (ACWP) and the Budgeted Cost of Work Scheduled (BCWS). These fundamental metrics can be combined to show whether the project is on schedule and on budget, and if not, there are ratios that show the percentage the project is over or under budget and the percentage the project is ahead of or behind schedule.

Let’s look at the environmental factors that must be in place before Earned Value can be implemented and why these factors can work against the adoption.

#### **Projects**

On the project side, the biggest factor to consider is the simple rule of “garbage in – garbage out.”

- **Workplan.** You need a good workplan with good estimates for all of the underlying activities. If you are imprecise with your effort and cost estimates, earned value calculations will not work well for you.
- **Scope change management.** If you create good initial estimates for the work activities, but then you do a poor job of managing scope, the Earned Value calculations are going to go bad in a hurry. On the other hand, the earned value numbers would be showing the effects of taking on more unapproved work and so they would start to raise a problem flag early in the project.
- **Capturing actual effort and cost.** Many project managers build good workplans and manage the workplan based on completing the activities on schedule. Many projects don’t capture the actual effort hours associated with completing each activity. Obviously that is needed for Earned Value calculations to work.

#### **Organizational Factors**

It is difficult to implement Earned Value on one individual project if the entire organization is not behind it. First of all, it takes time to capture and calculate Earned Value numbers and you may find that this extra time is not appreciated by your manager – even if you could show that the extra time invested would ultimately result in a better managed project. Likewise, the resulting Earned Value numbers would be of interest to the project manager, but most other stakeholders in the organization won’t have a clue as to what the formulas mean.

From an organizational perspective, the implementation of Earned Value into the organization requires a change in the way people perform their jobs. As such, it needs to be seen as a culture change initiative. First and foremost in a culture change initiative is



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sponsorship and leadership. You must have a champion who is willing to be the sponsor and who will ensure the proper training, processes and incentives are put into place so that Earned Value concepts are applied consistently across the organization.

The work required to implement earned value also depends on the processes that exist in your organization today. If your organization is not used to creating detailed workplans with accurate effort, cost and duration estimates, it will take some work to build that skill. Likewise, if people aren't used to tracking time and costs on an activity level, it will require major changes to how team members account for and track what they are working on. To implement time reporting may also require new tools and processes be established as well.

### **Weighing the Cost Against the Value**

Here is the decision process that executives might go through to know if Earned Value should be implemented across the organization.

First, they would look at the effort and cost associated with implementing the concepts successfully. As described earlier, depending on where the organization is today, the cost could be substantial and the timeframe could be quite long.

Second, they need to determine what other core skills will need to be enhanced to make the Earned Value concepts work. For instance, project managers may need to learn better estimating techniques for the calculations to be relevant. They may also need to learn better techniques for building more accurate workplans.

Third, after understanding the effort and cost, the executive would ask what incremental value would be gained by having more precision on measuring project progress. For instance, if a project manager manages by end dates, they should pretty much know whether the project is ahead or behind schedule. So, if the project manager can estimate that a project is three weeks over schedule, is there really much additional value with knowing that the project is trending three weeks and two days over schedule, as shown through Earned Value calculations? Likewise, a project manager may estimate a project is \$10,000 overbudget, while the Earned Value calculation might show that the project is trending at \$10,615 over budget. In other words, if the project managers have a decent skill set today, what incremental value will be gained by going to Earned Value?

### **Summary**

Perhaps it is no wonder that organizations see a lot of pain in moving toward Earned Value and not a corresponding amount of incremental value. Given the alternative initiatives and the usage of resources, it is not surprising that in most organizations, a move toward Earned Value would not be one of the top priorities. In fact, the only thing that might make you move that direction would be a mandate, which is what some government departments have issued. That could explain why only a small minority of companies utilize Earned Value today, even though the initial mandates came down from the US Defense Department thirty five years ago. It is a good concept and it makes sense intuitively. However, from the perspective of most companies, the pain of implementation seems to outweigh the value gained.