



TenStep Supplemental Paper

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Use Earned Value to Determine Project Progress

If you are a project manager, have you ever been asked how far along you were in a project? Of course you have. The question itself is vague, and so your equally vague answer of “we are pretty close to schedule” sounds like an appropriate response. You might even have given the equally vague “we’re about half done” or “we’re 90% complete”.

If you do not have a valid workplan, or if you are not keeping the workplan up-to-date, you know that your answer is pretty much a guess. If you have a good workplan and you are keeping it up-to-date, you should have a sense for how much work is remaining and what the projected end date is. But are you 50% complete? Or 90% complete? Who knows!

Enter Earned Value

The earned value metrics were established to remove the guess work from determining where you are at in relation to a baseline. In theory, this concept is very elegant and interesting. Using it allows a project manager to know precisely how far along he or she is, how much work is remaining, what the expected cost and end date will be, and all sorts of other interesting information.

However, are you using earned value on your project today? Probably not. You are not using earned value because your organization has not adopted it. Implementing earned value on your project requires a tremendous level of discipline and common processes. It is hard to apply earned value one project at a time, since no one else would understand what you are doing and why. Chances are you have never seen earned value at all or at least not outside a training class.

History

Earned value has not been around for hundreds of years. You can actually trace its beginning to the late 1800’s and early 1900’s, as managers attempted to make the factory floor and the production line as efficient as possible. The drive for efficiency requires a foundation in metrics and earned value was a way to measure things more precisely.

In the 1960’s, the US Department of Defense began to mandate the use of earned value on defense related projects. As you might expect, if the government is contracting out projects worth hundreds of millions, or billions, or dollars, they want project progress updates to consist of more than “we seem to be on target.” Earned value calculations can provide a better sense for exactly where the project is against the baseline and provide an early warning if the trends indicate that the project would be overbudget or over its deadline.

Unfortunately, many people believe that the standards laid out by the Defense Department are much too cumbersome and rigid and that many of the earned value reporting requirements provide only incremental value (if any). This has taken what



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could be a valuable project management tool and turned it into a project burden. This perception of Earned Value as a burden may be one of the reasons that earned value has never taken off in private industry.

The Basic Concepts of Earned Value

Earned value is a way of measuring progress.

In any project, the value to be gained is based on completing the work. From a customer perspective, you might think that business value is achieved when the project is completed. If a project gets canceled 90% through completion, the business value might be zero. However, earned value looks at this differently. With earned value, you are earning the value of the project on an incremental scale as the project is executing. When 50% of the work is completed, you could say that 50% of the value of the project has been realized as well.

The general idea behind earned value is to compare where you actually are against where you planned to be. Let's refine this idea a bit further. Let's say you are currently working on activities 49, 87, 88, 100 and 108 in your workplan and that all of the dependent activities in front of them have been completed. Earned value allows you to quantify all of the work that has been accomplished so far on the project. It also allows you to quantify all of the work that should have been done on the project so far. Then, you can compare the work that has been done against the work that should have been done to determine if you are on schedule, ahead of schedule or behind schedule.

Likewise, given where you are today, earned value calculations allow you to determine the total cost of the work done so far, as well as the total cost of all the work you expected to have completed by now. Comparing these two numbers gives you a sense for whether you are trending overbudget, underbudget or on budget.

Utilizing both the schedule and cost metrics gives you more information as well. You may well be spending your budget faster than what you anticipated, but what if the reason is because you are ahead of schedule as well? That is, you may be spending more because your team may be getting more work done than planned. That may be fine. Likewise, if your project is behind schedule, but you are also behind in your spending, that may be fine as well. Perhaps you were not able to get the team members allocated as fast as you planned. So, your project is behind schedule, as is your spending rate. If you have a critical end date, this may be a problem. If your end date is a little flexible, you may be fine as long as you don't overspend your budget.

Earned value gives you the information you need to make the right decisions.

Summary

Earned value is a concept that can help you determine precisely where you are at on a project against where you planned to be. It takes into account work completed against the level of work planned to be completed, and the actual expenditures against the planned expenses at any given time of the project. The value of this information is powerful.



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However, there is a price to pay in terms of tracking and collecting the information as well.