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Beyond Burn Down

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Project managers can report progress on agile projects using metrics that may appeal to stakeholders steeped in more traditional practices. Two approaches gaining appeal are agile earned value management and iteration status reports.

A burn-down chart is a graphical representation of work left to do vs. time. And in the world of agile software development, it is the primary metric that everyone on the development team uses to gauge progress toward completing an iteration.

But what about for others who may not live in that agile world? What about all those stakeholders you communicate with as the project manager? How can you share a sense of project progress with them?

Nancy Neehas an answer or two. As the executive director of project management and business analysis programs at ESI International in Arlington, Va., Nee gave a highly rated speech at the 2010 PMI Global Congress suggesting that project managers can adapt data from the familiar burn-down chart and apply it differently to provide meaningful measurements to a broader audience. In particular, she suggests that putting an agile twist on tried-and-true earned value management calculations can reveal progress and creating an iteration status chart can track shifting priorities.

"The notion of agile in the project environment isn't new," says Nee, who holds PMP and CBAP designations. "A lot of organizations are looking to use the principles and practices of agile, thinking that they can deliver better, faster and cheaper. However, along the way, leaders in organizations who have grown up in the waterfall approach tend to want to know how projects are going from traditional perspectives. They have a hard time shifting their mindset to the new types of metrics that agile has to offer. So we saw the need in the marketplace to help stakeholders and sponsors of these agile projects understand progress on the projects."

Read on for details about the two measurements.

AGILE EARNED VALUE MANAGEMENT

Traditional tools, such as status dashboards showing red, yellow or green, are not typical in the agile environment. Therefore, Nee says, agile project managers usually

monitor progress with burn-down charts, but increasing numbers of managers are pushing beyond those singular charts to use that data for Agile earned value management (AgileEVM). These calculations can show stakeholders the value delivered, costs, resources consumed and future expectations, she says.

“A burn-down chart can only tell you progress for that particular iteration,” Nee says. “What the burn-down chart doesn’t tell you is how well you are doing in the iteration considering the number of iterations in a release. That’s where the value of AgileEVM comes in. It answers the question, ‘Am I going to achieve what I said I was going to achieve by the time of the release?’ It is the same theory of earned value, but it is applied to the release.”

The point about AgileEVM being tied to planned releases is important, Nee says. “The concept of earned value in agile is essentially the same as earned value in the traditional project management space, except for the reporting structure and the timeframe, which has to be done based on the iteration as well as the release. You are doing it at a chunked-up level vs. earned value in traditional project, which is measured across the entire project schedule, which could be two or three years long.”

To create useful AgileEVM data, project managers need careful and current burn-down charts as well as a number of initial baselines, such as number of planned iterations, number of planned story points in a release and planned budget for a release. Here’s a sample calculation:

AgileEVM Example

The budget for the release is \$100,000 for the completion of 100 story points. At this time, you have completed 25 of the story points at a cost of \$20,000.

Actual percent complete: $25 \text{ complete story points} / 100 \text{ story points} = 25 \text{ percent complete}$

Earned Value = actual percent complete X total budget = \$25,000

Nee says there are different ways to show AgileEVM depending on what the project manager would like to have the stakeholders or sponsors understand about how the project is moving forward. Calculations of value can be based on the number of planned iterations, the number of story points in a release cycle or the number of planned releases, she says.

There are skeptics about AgileEVM the same way some are unconvinced with EVM in waterfall projects, Nee admits. “Acceptance of EVM in agile projects is going to be very similar to how EVM is applied in the traditional space,” she says. “There are lots of organizations using traditional project management that don’t report earned value. It’s a matter of comfort and maturity level.”

Further, Nee predicts that the new concept will be tested. “There will be more scrutiny applied in the agile community when it comes to earned value, because it is a different way of thinking about how you are showing value or progress, when you are only talking about certain components of a project. It may be hard for the community to make a shift to say, ‘I can understand that we are achieving proper, balanced value

from a release standpoint.' Once they get over the initial uneasiness, they will start to see the value that earned value brings, especially when they have chosen to execute major initiatives in an agile setting. They are going to need more metrics to help them understand how things are going."

ITERATION STATUS CHART

An iteration status chart collects a list of features that are planned for the iteration and compares it with the list of features completed and moved to future iterations. It provides visibility of what the original plan for the iterations looked like a few weeks ago and how it looks today.

"The iteration status chart is a high-level overview that gives the stakeholder a comparison of how the team did with the iteration against the plan," Nee says. "It answers the questions, 'Did we complete the items we said we were going to complete? Did some of the story points move to another iteration? And, if they have moved, how much will it affect that iteration?'"

While these charts provide fairly straightforward information, they can support an organization's shifting priorities, according to Nee. "The value of the chart is to provide a mechanism for the ever-changing requirements that a business goes through and that agile development methods are designed to handle," she says. "We can have the active dialogue about requirements priority and adjust the iterations so high priorities are not at the bottom. This status chart is a good place to spark that type of conversation with stakeholders."

Nee says the tool is unique to the agile environment. "The whole concept of agile is that we will always adjust the schedule and the requirements per iteration based off of stakeholder priority and need. Project managers can use the chart as a means to have that discussion of priorities. We can reaffirm that the priorities are still the same or adjust if we need to. Either way, it shows how we are doing with the forward momentum to a release."

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