

Earned Value Management Cheat Sheet

What is Earned Value Management?

Earned Value Management is used to measure and manage the performance of a project

Acronyms to know

Acronym	Term	Meaning
BAC	Budget at Completion	What was the budget for the total project?
PV	Planned Value	The estimated or planned value of the work that needs to be completed from today
EV	Earned Value	The estimated or planned value of the work that that has been completed from today
VAC	Variance at Completion	How much over or under budget will the project come in at from today when it's completed?

Formulas to Know

Acronym	Term	Formula	Meaning
SV	Schedule Variance	$EV - PV$	<ul style="list-style-type: none">• Negative = Behind Schedule• Positive = Ahead of Schedule
CV	Cost Variance	$EV - AC$	<ul style="list-style-type: none">• Negative = Over Budget• Positive = Under Budget
SPI	Schedule Performance Index	EV / PV	<p>How the project is progressing against the planned project schedule</p> <p>SPI = 1 The schedule is progressing as planned</p> <p>SPI < 1 The project is behind schedule</p> <p>SPI > 1 The project is ahead of schedule</p>

Formulas to Know

Acronym	Term	Formula	Notes
CPI	Cost Performance Index	EV / AC	<p>How much value you are getting from the completed work and the cost to finish that work</p> <p>CPI = 1 Cost of work is the same as the budget for work</p> <p>CPI < 1 Work is costing more than budgeted</p> <p>CPI > 1 Work is costing less than budgeted</p>
ETC	Estimate to Complete	$EAC - AC$	The cost left to complete the project

Formulas to Know

Acronym	Term	Formula	Notes
VAC	Variance at Completion	$BAC - EAC$	How much over or under budget the project will be at completion
TCPI	To Complete Performance Index	$(BAC - EV) / (BAC - AC)$	The rate of work needed to complete the project within budget

Estimate at Completion / EAC



There are a few formulas that can be used to calculate the estimated value at completion. This estimates how much the project will cost once it is completed. The idea is to allow the project manager to forecast future performance based on previous performance of the project.

The following are given in descending order of popularity. The first is also popular with anyone taking the project management exam.

Estimate at Completion / EAC

Formula

Notes

$AC + \text{Bottom-up ETC}$

The cost estimate was flawed. Used to calculate the new cost estimate for the remainder of the project's work

BAC/CPI

The project will continue to perform as it has in the past. Future performance will match previous performance

$+ (BAC - EV)$

Due to an unseen circumstance that will not occur again, the project has moved from the original budget. The planned cost will continue on as normal from today

$AC + (BAC - EV)/(CPI * SPI)$

Use if the project is over budget, behind schedule or you need to finish the project within schedule. Both the cost and the schedule are considered.

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