

# Monitoring via EVM

(PROJECT STARTED 7 MONTHS AGO)

Task ID	Activity	Pred.	Duration (months)	Budget (K\$)	Progress	AC
1	Preparation	-	2	600	100%	600
2	Design	1	3	1200	100%	1400
3	Implementation	2	2	400	50%	200
4	Testing	2	3	1200	33.3%	500
5	Deployment	4	3	300	0%	0

- **How much is it Over/Under budget?**

The project is over the budget by 300,000\$.

- **How many days, is it ahead/behind the schedule?**

The project is back and behind by 30 days (1 month).

- **By the end of the project, how much will it be Over / Under Budget?**

By the end of the project it will be well over 500,000\$ than the budget.

CV - Cost variance	<p>Cost variance = budgeted cost of work performed (BCWP) - actual cost of work performed (ACWP)</p> <p><b>(CV = EV - AC)</b></p> <p>AC = 600 + 1400 + 200 + 500 = 2700K</p> <p>EV = 600 + 1400 + (0.5 * 400) + (0.33 * 1200) = 2600K</p> <p>CV = 2600 - 2700 = -300K</p>
SV - Schedule Variance	<p>Schedule Variance (SV) = Earned Value (EV) – Planned Value (PV)</p> <p><b>(SV = EV - PV)</b></p> <p>PV = scheduled work * BAC</p> <p>PV = 3 * 2200 = 6600K</p> <p>SV = 2600 - 400 = 2200K</p>
CPI - Cost Performance Index	<p>Cost Performance Index (CPI) = earned value (EV) / actual cost (AC)</p> <p><b>(CPI = EV / AC)</b></p> <p>CPI = EV / AC</p> <p>CPI = 2600 / 2700 = 0.962 &gt; 1</p> <p><u>over budget</u></p>
SPI - Scheduled Performance Index	<p>Scheduled Performance Index = earned value (EV) / planned value (PV)</p> <p><b>(SPI = EV / PV)</b></p> <p>SPI = EV / PV</p> <p>SPI = 2600 / 6600 = 0.4</p>
EAC - Estimate at Completion	<p>Estimate at Completion (EAC) = AC + (BAC - EV)/SPI * CPI (Estimate at Completion equals Actual Costs plus Budget at Completion minus Earned Value divided by Schedule Performance Index times Cost Performance Index).</p> <p><b>(EAC = BAC / CPI)</b></p> <p>EAC = BAC / CPI</p> <p>EAC = 2200 / 0.962 = 2291.667</p>