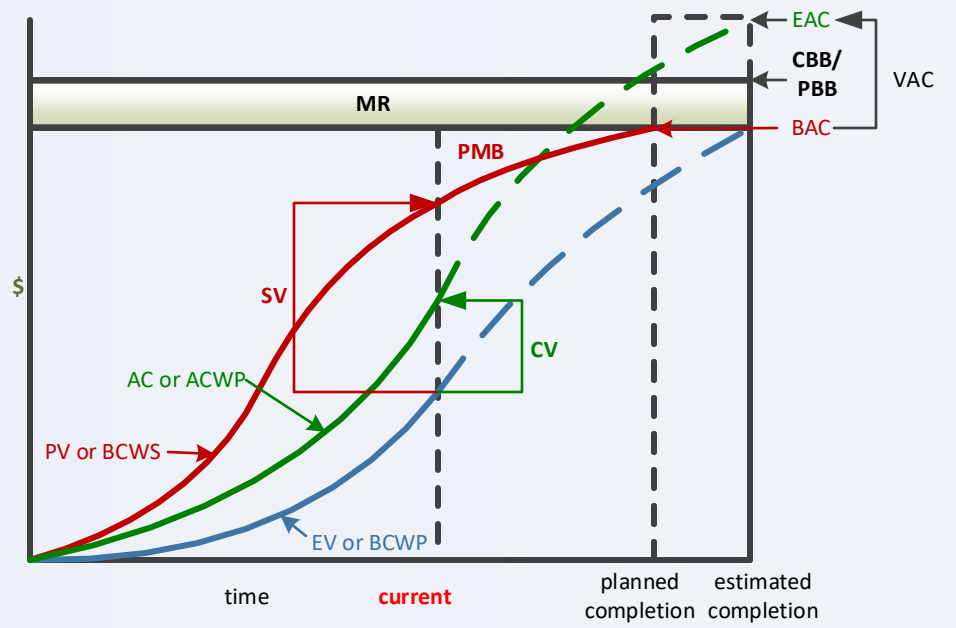


¹ Note: AUW funding is authorized by an NTE value and added to CP. However, the amount of AUW budget added to the CBB/PBB depends on the estimate for the authorized scope. The full amount of the scope does not increase the CP until negotiated.

Earned Value Management System Basics



Performance Baseline Components

- (Performance Baseline must clearly document scope and CD-4 date)
- AUW = Authorized Unpriced Work (contractually approved, but not yet negotiated)
- CA= Control Account (includes AUW) = WPs + PPs
- CBB = Contract Budget Base = PMB + MR; valid when 1 contract to 1 project; else PBB
- CP= Contract Price = CBB + Profit/Fee
- MR= Management Reserve is held by contractor (Contingency is held by DOE)
- NCC= Contract price less Profit/Fees
- ODC= Other Direct Costs
- OTB= Established performance budget that exceeds the value of the negotiated contract
- PB= Performance Baseline (TPC) = CP + Contingency + DOE ODC
- PBB= Project Budget Base = PMB + MR; valid when 1 contract to multiple projects
- PMB= Performance Measurement Baseline = CAs + UB + SLPPs
- PP= Planning Package (far-term activities within a CA)
- SLPP = Summary Level Planning Package
- TAB = Total Allocated Budget CBB + OTB or PMB + MR + OTB
- TPC = Total Project Cost
- UB = Undistributed Budget (activities not yet distributed to CA)
- WP= Work Package (near-term, detail-planned activities within a CA)

EVMS Basic Components

- AC = Actual Cost= ACWP = Actual Cost of Work Performed
- EV = Earned Value=BCWP = Budgeted Cost for Work Performed
- PV =Planned Value= BCWS = Budgeted Cost for Work Scheduled
- BAC = Budget at Completion=∑BCWS= Sum of Budgeted Cost for Work Scheduled
- EAC=Estimate at Completion= ACWP + Estimate to Complete (ETC)

VARIANCES

- CV = EV - AC = BCWP - ACWP = Cost Variance
- SV = EV - PV = BCWP - BCWS = Schedule Variance
- CV% = (EV - AC) / EV = (BCWP - ACWP) / BCWP = Cost Variance (%)
- SV% = (EV - PV) / PV = (BCWP - BCWS) / BCWS = Schedule Variance (%)
- VAC = BAC - EAC = Variance at Completion

OVERALL STATUS

- % scheduled = PV_{cum} / BAC = BCWS_{cum} / BAC
- % complete = EV_{cum} / BAC = BCWP_{cum} / BAC
- % budget spent = AC_{cum} / BAC = ACWP_{cum} / BAC
- Work Remaining (WR) = BAC - EV_{cum} = BAC - BCWP_{cum}

PERFORMANCE INDICES (Favorable is >1.0, unfavorable is <1.0)

- CPI = EV / AC = BCWP / ACWP = Cost Performance Index
- SPI = EV / PV = BCWP / BCWS = Schedule Performance Index
- TCPI_{EAC} = WR / (EAC - AC_{cum}) = EAC-based To Complete Performance Index

ESTIMATE AT COMPLETION FORMULAE

- EAC = BAC / CPI_{cum} = Estimate at Completion (general)
- EAC_{CPIcum} = AC_{cum} + WR / CPI_{cum} = Estimate at Completion (CPI)
- EAC_{composite} = AC_{cum} + WR / (CPI_{cum} * SPI_{cum}) = Estimate at Completion (composite)
- EAC_{CPI3mo} = AC_{cum} + WR / CPI_{3mo} = Estimate at Completion (3 Mo. CPI)
- Note: CPI_{3mo} = (IncEV_n + IncEV_{n-1} + IncEV_{n-2}) / (IncAC_n + IncAC_{n-1} + IncAC_{n-2})