

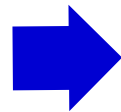
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Projektový management

Realizace a ukončení projektu

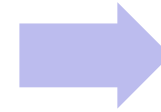
PŘEDPROJEKTOVÁ FÁZE

- Studie příležitosti
- Studie proveditelnosti
- Strategie



FÁZE ŘÍZENÍ PROJEKTU

- Zahájení
- Plánování
- Realizace + kontrola
- Ukončení



POPROJEKTOVÁ FÁZE

- Přínosy
- Lessons learned

Realizace projektu

- Plán projektu schválen
- Rozpočet, harmonogram, WBS – baseline
- Plány – rizika, zainteresované strany
- Kick-off meeting

“If everything seems under control, you're not going fast enough.” (M. Addretti, winner of the 1978 Formula One World Championship)

Realizace projektu

- Reportování
- Srovnávání skutečnosti s plánem
 - Procenta dokončenosti
 - Project status/stage
 - Milestones trend analysis
 - Earned Value Management (EVM)

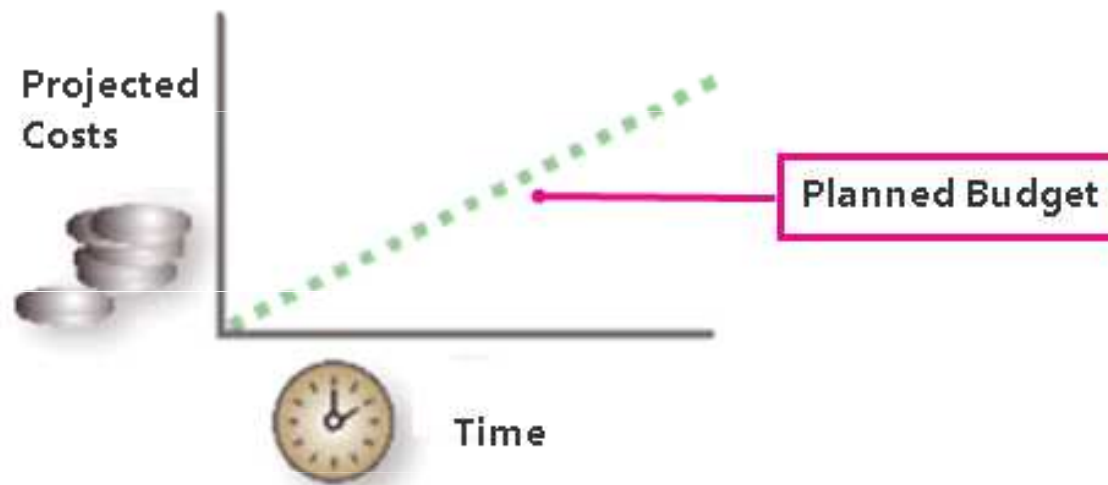
Earned Value Management - EVM

- A way to measure and evaluate the project performance
- Compares the amount of work planned with what is actually accomplished to determine whether the project is on the track
- Appropriate for projects with more or less stable scope
(investment property construction etc.)

EVM: Planned Value

Planned value (PV)

- the planned cost of work scheduled to be done in a given time period



EVM: Planned value

EXAMPLE

According to the plan, 3 employees should work on the task for 12 days.

Control time: after 6 days

Planned value (at a control time) is _____ mandays.

EVM: Earned Value

Earned value (EV)

- the planned cost of work actually performed in a given time period
- the amount of EV is determined by totaling the cost estimates for the activities that were actually completed in the time period.

EXAMPLE: *According to the plan, 3 employees should work on the task for 12 days.*

75% of the task is ready on the control day 6.

- *Earned value is _____ mandays.*

EVM: Actual cost

Actual cost (AC)

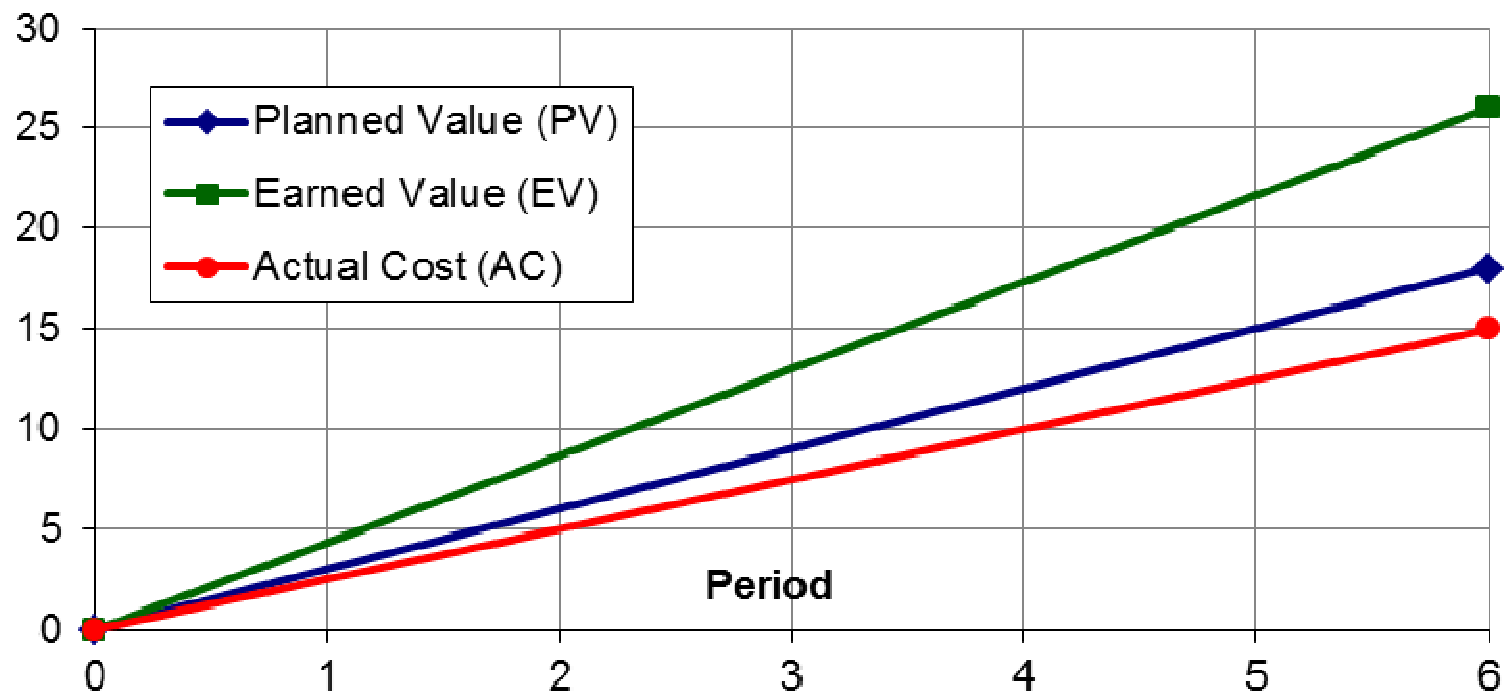
- determined by totaling the expenditures for the work performed in a given time period

EXAMPLE

According to the plan, 3 employees should work on the task for 12 days.

- *Report from the responsible employee (on a control day 6): “We worked on the task according to the plan, but one colleague fell ill the third day. So from the fourth day there are only two of us working on the task.”*
- *Actual cost is _____ mandays.*

PV, EV, AC



USEFUL TEMPLATE: <http://www.vertex42.com/ExcelTemplates/earned-value-management.html>

VARIANCES

Schedule variance (SV) the difference between the planned and the actual work completed

- $SV = EV - PV$
- Ahead/behind the schedule?

Cost variance (CV)

- the difference between the planned cost and the actual cost of work completed
- $CV = EV - AC$
- Under/over the budget?

INDEXES

SPI – schedule performance index

- a ratio of work performed to work scheduled
- this ratio is a measure of efficiency in the schedule

$$\text{SPI} = \text{EV} / \text{PV}$$

- $\text{SPI} < 1$ a project is behind the schedule
- $\text{SPI} > 1$ a project ahead of schedule

INDEXES

CPI – cost performance index

- a ratio of budgeted costs to actual costs
- this ratio is a measure of cost efficiency

$$\text{CPI} = \text{EV} / \text{AC}$$

- $\text{CPI} < 1$the work is costing more than planned
- $\text{CPI} > 1$the work is being produced for less than planned

INDEXES

- Provide a quick snapshot of the project's efficiencies at a given point in time
- More valuable when used periodically
- Used for forecasting:
 - **Budget at completion (BAC) - from WBS**
 - **Estimate to complete (ETC)=(BAC-EV)/CPI**
 - **Estimate at completion (EAC)=AC+ETC**
 - **To complete performance index (TCPI)=(BAC-EV)/(BAC-AC)**

EVM Exercise

- The Project was scheduled to cost €1,500 and was originally scheduled to be completed today. As of today, however, the project has spent €1,350, and it is estimated that only two-thirds of the work has been completed. Calculate the schedule and cost variances and the schedule and cost indices.

SV=

CV=

CPI=

SPI=

Limitations

- Quantification of project plan is required (x SW, research)
- Project accounting is a necessary prerequisite
- 90-90 rule
- Discretization error
- <https://www.pmconsulting.cz/pm-wiki/evm-earned-value-management/>

Ukončení projektu

- Akceptace
- Předání výsledku projektu
- Benefits – měření – později (po projektu)
- Hodnocení průběhu projektu + lessons learned

Příklady projektů

- Olkiluoto Nuclear Power Plant
- BER Airport
- New Coke
- Elbphilharmonie Hamburg
- Hoover-dam

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Děkujeme! Máte otázky?

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