

# EVM - BASIC ELEMENTS

[http://www.tutorialspoint.com/earn\\_value\\_management/evm\\_elements.htm](http://www.tutorialspoint.com/earn_value_management/evm_elements.htm)

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EVM consists of the following three basic elements:

- Planned Value
- Actual Cost
- Earned Value

All the three elements are captured on a regular basis as of a reporting date.

## Planned Value

Planned value *PV* is also referred to as Budgeted Cost of Work Scheduled *BCWS*. *PV* or *BCWS* is the total cost of the work scheduled/planned as of a reporting date.

It is calculated as:

$$PV \text{ or } BCWS = \text{Hourly Rate} \times \text{Total Hours Planned or Scheduled}$$

**NOTE:** Hourly Rate is the rate at which effort will be valued.

## Actual Cost

Actual cost *AC* is also referred to as Actual Cost of Work Performed *ACWP*. *AC* or *ACWP* is the total cost taken to complete the work as of a reporting date.

It is calculated as:

$$AC \text{ or } ACWP = \text{Hourly Rate} \times \text{Total Hours Spent}$$

## Earned Value

Earned value *EV* is also referred to as Budgeted Cost of Work Performed *BCWP*. *EV* or *BCWP* is the total cost of the work completed/performed as of a reporting date.

It is calculated as:

$$EV \text{ or } BCWP = \text{Baselined Cost} \times \% \text{ Complete Actual}$$

All these three elements can be derived from Work Breakdown Structure by associating the costs to each of the tasks. For a big project, it will be a tedious task to calculate these elements manually. Scheduling software tools like Microsoft Project is used to calculate these three elements.

**NOTE:** % Completed Planned and % Completed Actual are defined below.

## % Completed Planned

The percentage of work which was planned to be completed by the Reporting Date. It is calculated using the following formula:

$$\% \text{ Completed Planned} = PV / BAC$$

## % Completed Actual

The percentage of work which was actually completed by the Reporting Date. It is calculated using the following formula:

$$\% \text{ Completed Actual} = AC / EAC$$

