

# EVM - MISCELLANEOUS FORMULA

## Budget at Completion

- Budget at Completion *BAC* is the total budget allocated to the project.
- *BAC* is generally plotted over time. For example, periods of reporting *Monthly, Weekly, etc.*
- *BAC* is used to compute the Estimate at Completion *EAC*, explained in the next section.
- *BAC* is also used to compute the TCPI and TSPI.

*BAC* is calculated using the following formula:

$$BAC = \text{Baselined Effort} - \text{hours} \times \text{Hourly Rate}$$

## Estimate to Complete

- Estimate to Complete *ETC* is the estimated cost required to complete the remainder of the project.
- *ETC* is calculated and applied when the past estimating assumptions become invalid and a need for fresh estimates arises.
- *ETC* is used to compute the Estimation at Completion *EAC*.

## Estimate at Completion

Estimate at Completion *EAC* is the estimated cost of the project at the end of the project.

There are three methods to calculate *EAC*:

- **Variations are typical** - This method is used when the variations at the current stage are typical and are not expected to occur in the future.
- **Past estimating assumptions are not valid** - This method is used when the past estimating assumptions are not valid and fresh estimates are applied to the project.
- **Variations will be present in the future** - This method is used when the assumption is that the current variations will continue to be present in the future.

The formulas for calculation of the three methods are as given below:

- $AC + BAC - EV$
- $AC + ETC$  *EstimateToComplete*
- $AC + BAC - EV / CPI$

## Variance at Completion

Variance at completion *VAC* is the variance on the total budget at the end of the project.

This is the difference between what the project was originally expected *baselined* to cost versus what it is now expected to cost.

*VAC* is calculated using the following formula:

$$VAC = BAC - EAC$$

## % 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:

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

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