

PROJECT PLANNING & CONTROL Lesson 8: Project Tracking

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Chapter Description

- Aims
 - The aim of this chapter to expose and understand students to apply basic project tracking such as Earned Value (EV) in relation to project management
- Expected Outcomes
 - At the conclusion of this chapter, the students should be able to:
 - Understand the project tracking knowledge and terms.
 - Apply using Earned Value and Forecasting technique for planning and control tool
 - Demonstrate SMART principles to a project
- Learning References
 - Erik W. Larson & Clifford F. (2014). Project Management: The Managerial Process (6th Ed.). McGraw-Hill Education, New York.
 - Rory, B (2003), Project Management: Planning & Control Technique (3rd Ed.)New Zealand



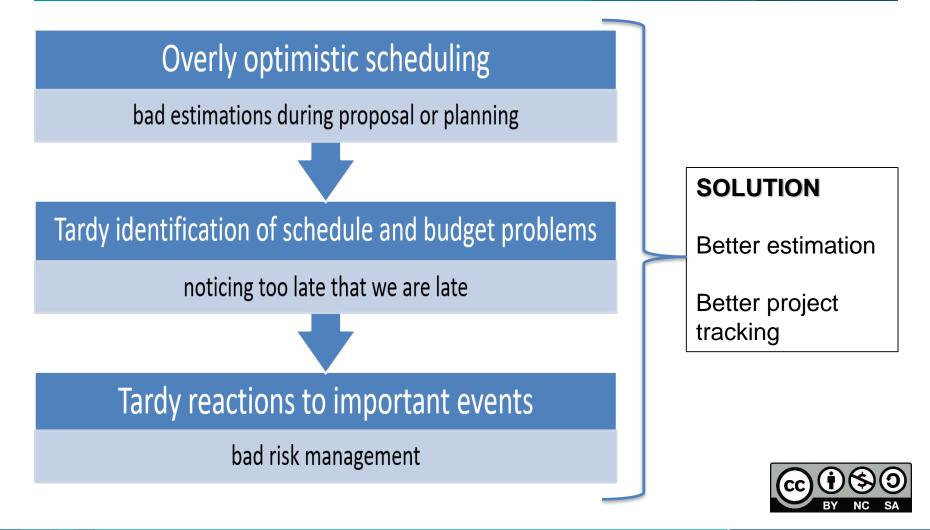
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Content of LESSON 8 PROJECT TRACKING

Overview of Project Tracking Baseline and Variances The Tracking Gantt Using the Spend and Effort Plan Using Earned Value Forecasting techniques



Overview of Project Tracking Reasons & Solution for late Projects



Objectives of Project Tracking

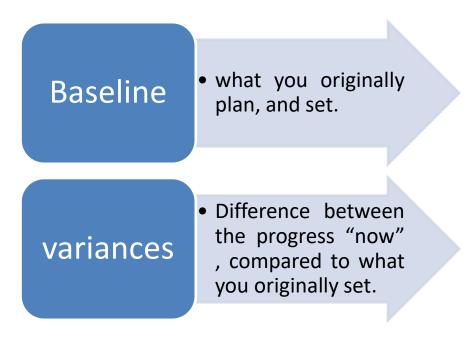
SHORT TERM - Early detection of irregular events

LONG TERM - Creation of preventive actions - Improvement of estimation accuracy



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Techniques for Project Tracking Baseline & Variances



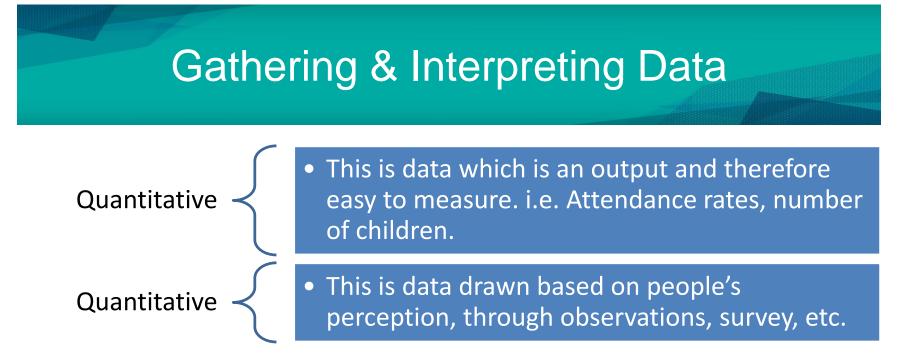
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10	Log footage	16 hrs	16 hrs	0 hrs	0 hrs	16 hrs	0%	
11	Production complete	0 hrs	0 hrs	0 hrs	0 hrs	0 hrs	0%	
12	Post-Production	76 hrs	76 hrs	0 hrs	0 hrs	76 hrs	0%	
13	Fine cut edit	48 hrs	48 hrs	0 hrs	0 hrs	48 hrs	0%	
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The Tracking Gantt

- By using Gantt Charts, you can track progress.
- Gantt Charts shows you what you originally plan, and what you have done

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- The source of data for tracking can be obtained from:
 - Progress report
 - Meeting Reports.
 - Site survey reports
 - Daily /weekly dairy reports

So, when you have the data, you can analyze/interpret it by having meetings, discussions. By using appropriate software/ tool, you update /track your progress.



Using the Spend & Effort Plan

Spend and effort plan can be a good way to do project tracking.

Develop a weekly or monthly cumulative **budget spend plan** and then track actual costs against the plan. You can see differences between actual spending and the spend plan.

This technique is **useful** for executive briefings, especially where you want to match expenditures to a funding stream. However, this method is simple, and for some people this technique might be way too simple.

Dollars

Budget Spend Plan

Sources:

http://www.hyperthot.com/pm_cscs.htm

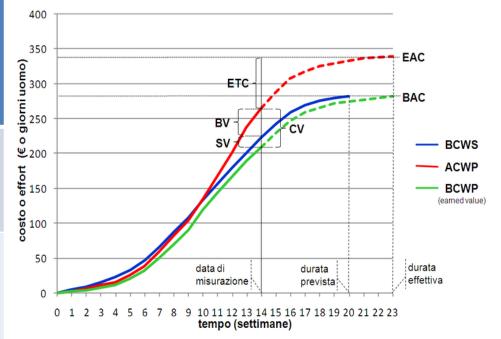


By: James R. Chapman

Earned Value (EV)

- Earned value technique was initially set up to track the progress of cost & time and the best way for measuring progress in projects.
- There are three (3) factors in EV report in order to use it effectively.

Budgeted Cost of Work Schedule (<mark>BCWS</mark>)	= Planned Value (PV). What you originally planned in the baseline. This is the value of the work scheduled to be completed as of the status date.
Actual Cost of Work Performed (ACWP)	 Actual Cost (AC) . This is the actual cost incurred to complete each task's actual work up to the status date.
The budgeted cost of work performed (BCWP)	called (BCWP) or Earned value (EV). This is the portion of the budgeted cost that should have been spent to complete each task's actual performed up to the status date.



Source:https://commons.wikimedia.org/wiki/File:Project_Management_(metriche_di_progetto).png

CC O S O By: Alphamu57



- If BCWP is above BCWS line, it means the number of tasks that are completed is greater than plan. (ahead schedule)
- If BCWP is below BCWS line, it means the number of tasks that are completed is lower than plan. (behind schedule)
- If ACWP above BCWP, means over budget at that point.



Cost & Schedule Variance

Variance

Schedule

Cost Variance

is the amount of money that was actually spent on a project , or part of a project compared to the amount of work that was actually accomplished.

Cost variance is the budgeted cost of work performed minus the actual cost of work performed.

CV = BCWP-ACWP CV=EV-AC

If CV is positive, good (More budget)

If CV is negative, bad (Less budget)

is the difference between the work that was really accomplished (BCWP), and the planned work that was supposed to be accomplished (BCWS)

SV=BCWP-BCWS

SV=EV-PV

If SV is positive (good, means ahead of schedule)

If SV is negative (not good, behind schedule)



Calculation Example Cost & Schedule Variance

Cost Variance

Suppose a project is in progress, and as of today the ACWP is RM 190,000, BCWP is RM 210,000 and BCWS is RM 200,000. What is the cost variance?

Answer:

CV = BCWP-ACWP = RM 210,000-RM 190,000 = RM 20,000

Suppose a project is in Schedule Variance progress, and today the ACWP is RM 190,000; BCWP is RM 210,000 and the BCWS is RM 200,000.What is the SV? Answer: SV= BCWP-BCWP =RM210,000 - RM 200,000 =RM 10,000



Forecasting Techniques

- You can forecast a project based on the performance index.
- Forecast whether a project is *good/bad*.

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CPI is a measure of how well the project is doing in terms of spending the project budget.

CPI = BCWP/ACWP

= If BCWP is bigger than ACWP, the value will be >1: Good ; <1: Not Good

🕉 🔒 Schedule performance index (SPI) is a measure of how well **Schedule Performance** the project is doing in terms of schedule.

SPI = BCWP/BCWS

=If BCWP is bigger than BCWS, the value will be > 1: Good.(Ahead of Schedule

u o **O** EAC is the forecast d value of the project Completi when the project is complete.

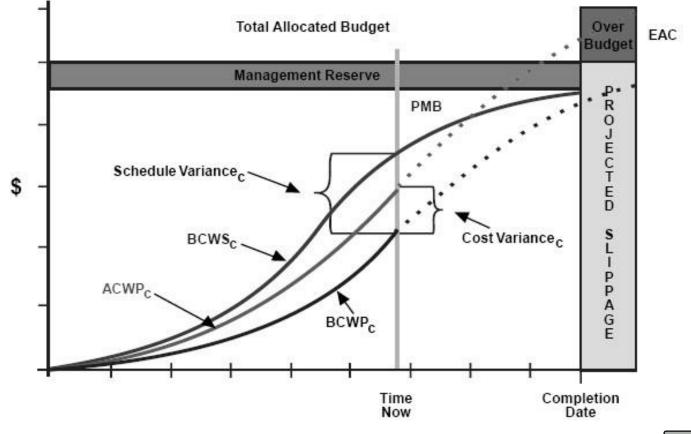
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Estimate

Normally is based on : EAC = (BAC x)ACWP)/BCWP



Earned Value Concept





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Conclusion of The Chapter

- Conclusion #1
 - Control and Gantt Chart are useful vehicles for monitoring time performance.
 - Earned value integrates cost and time or manhours and time.
 - Threshold variances can be set to flag problem areas.
- Conclusion #2
 - To making a tracking successfully, a PM should have:
 - Specific organisational activities being focused on
 - Different kinds of organisational goals
 - Timely corrective action
 - Communication of the mechanics of the control process





Disclaimer: The material prepared is for learning purpose only.