PDHonline Course P102A (8 PDH)

Project Management for Managers/Executives

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Project Management for Managers/ Executives

Via

WEB BASED LEARNING

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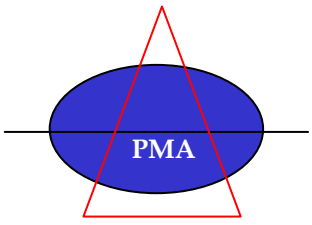


Module # 4

Measurement and Reporting of Project Progress and Summary Lessons

Objectives of Performance Measurement

1. Identify significant problems before they occur.
2. Identify opportunities for schedule acceleration, cost reduction, or technical improvement.
3. Facilitate the comparison of actual performance to plan.
4. Identify significant deviations from the plan.
5. Assure corrective action is taken when needed.
6. Determine value earned (what are you getting for money and time allocated).
7. To provide feedback to all shareholders.

The Earned Value Technique

The following definitions, example of a project status report and analysis will provide system clarity and demonstrate the power of this control technique.

Earned Value Definitions:

1. **BCWS** The budgeted cost for the work that is scheduled **to be** performed.
2. **BCWP** The budgeted cost for the work that **was** performed.
3. **ACWP** The actual cost for the work that was performed.

4. **BAC** The total budget at the completion of the project.

5. **C-VAR** The variance in **cost** from the Plan (BCWP – ACWP).

6. **S-VAR** The variance in **schedule** from the Plan (BCWP - BCWS).

7. **ETC** The estimate to complete.

8. **EAC** The estimate of the cost at the **completion** of the work

9. **CPI** A cost performance index (BCAWP/ACWP).

10. **SPI** A schedule performance index (BCWP/BCWS)

Now that we understand the all of the necessary terms, let's see exactly how the earned value system works.

Given the following data:

A task is scheduled to take 5 days to complete and each of the 5 days are equal.

Each day of the 5-day task is scheduled to cost $100, so the scheduled cost for the whole task is $500.

See the left-hand section of the chart on page 61.

Therefore:

The budget cost for the work scheduled (BCWS) is what?_ _ _ _ _ It is $500.

Now, at the end of 5 days, you determine that only 3 days of the task are complete (you do not receive credit for any partial days). See the center section of the chart on page 61.

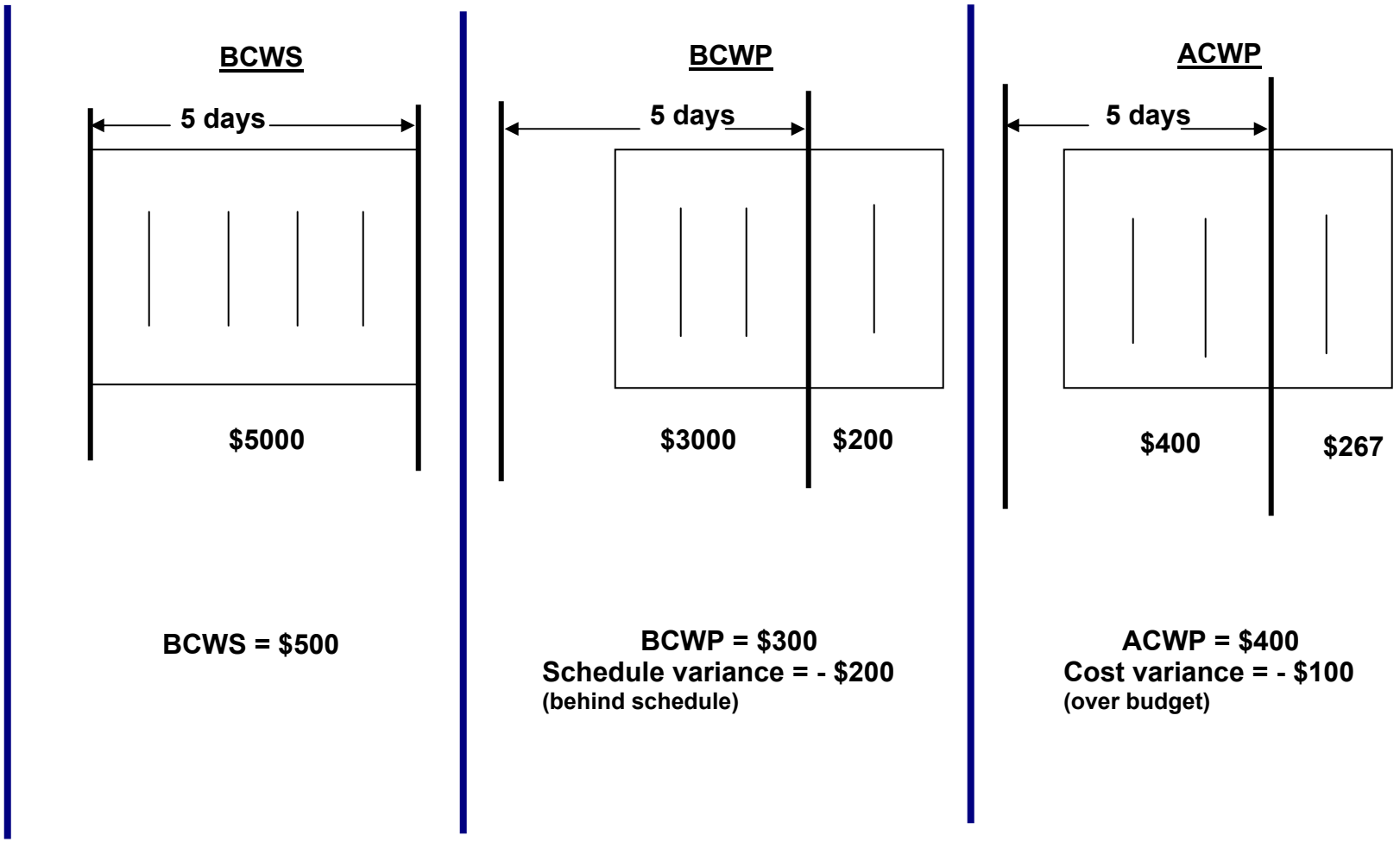
So, what is the budget cost of the work performed (BCWP)? _ _ _ _ It is $300 (3 days x $100).

Now, accounting hands you a report that tells you that the actual cost for 5 days of effort but only 3 completed days of work was $400. See the right hand section of the chart on page 61.

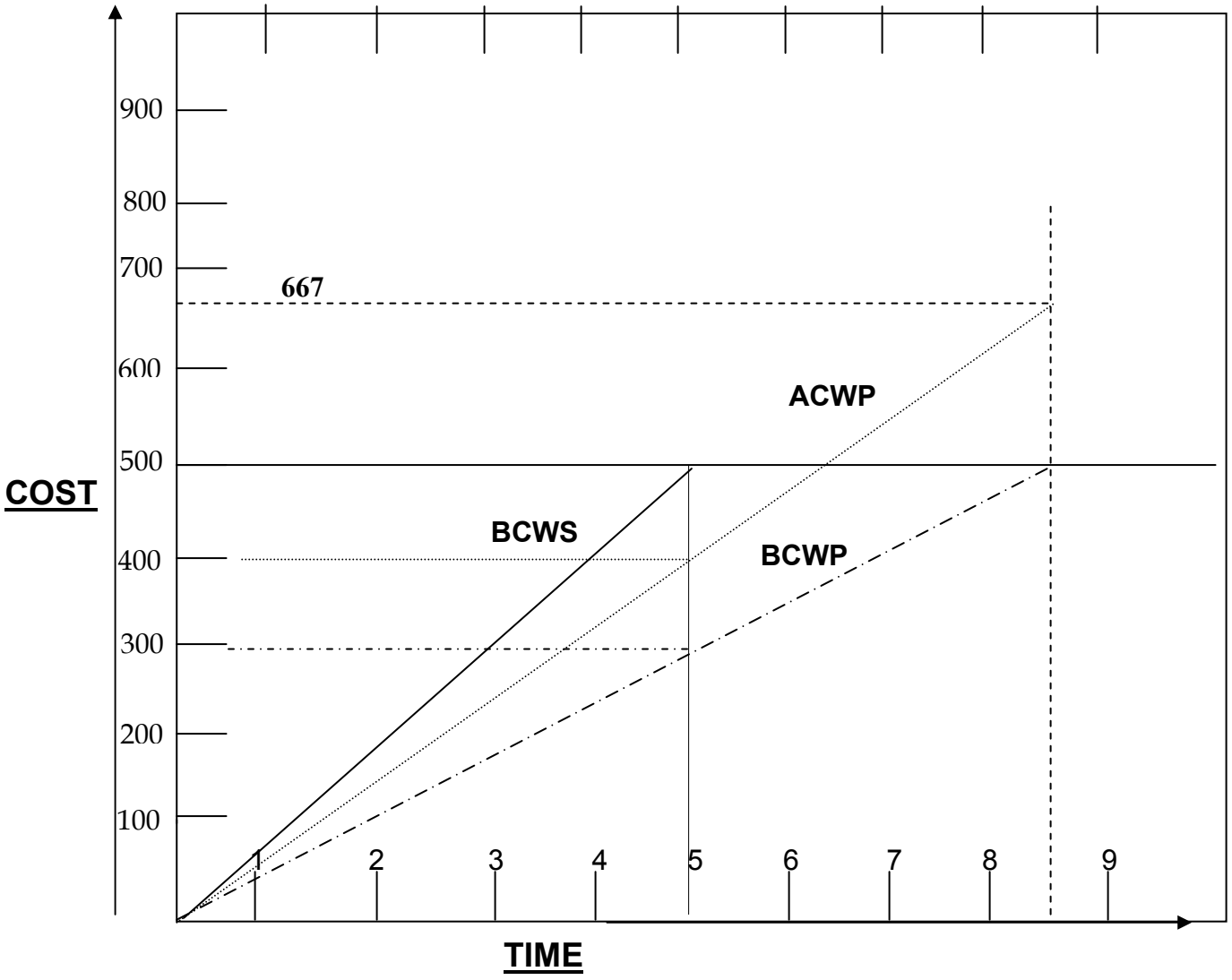
So, what is the actual cost of the work performed (ACWP)? _ _ _ _ It is $400.

Now let's graph the data. See the chart on page 62.

EARNED VALUE TECHNIQUE



EARNED VALUE TECHNIQUE



Now lets draw a simple graph with cost as the vertical (Y) axis and time (days) as the horizontal (X) axis.

Plot BCWS at $500 and 5 days. This was the plan (schedule). Draw a line between zero, zero and $500, 5 days.

Now plot BCWP at 5 days (it took you 5 days to complete only 3 days worth of work). You earned $300 (this is what you actually accomplished). Draw a line between zero, zero and $300, 5 days. Extend the BCWP line until it intersects the $500 line (BCWS). Draw a vertical line through this point. This tells you that at the current rate of progress, the task will complete at about 8.5 days.

Now plot ACWP at the $400 you actually spent and the 5 days it took you. Draw a line between zero, zero and $400, 5 days. Extend the ACWP line until it intersects the 8.5 day vertical line. Draw a horizontal line back to the vertical (cost) axis. This tells you that your estimate at completion (EAC) is $667.

Now you know the task will take 8.5 days and cost $667 at completion.

If you have a ten-task project, you calculate BCWS, BCWP and ACWP for each task, the same as we have done above. You then sum all of the task and you plot the totals. This will tell you where you are, when you will finish and how much the project will cost at finish.

The same process works for a hundred or thousand task project. However, manually handling the data gets very labor intensive for larger projects. There are many software programs available to handle large volumes of data. Microsoft project is one of them.

Project Review Meetings (internal to the project)

1. You must open communication with the team.

2. You must allow the team to report the status.

3. You should obtain agreement that problems or opportunities exist.

4. The team should identify individuals responsible for action to resolve each problem.

5. The team should report on previous action assignments.

6. Problems are NOT solved in the project meeting. Separate problem solving meetings should be held, attended only by those concerned directly with the problem.

Project Review Meetings (Top Management)

Some good questions to be prepared to answer are:

1. Is this project on schedule? If no, has the end date been extended? If yes, has the customer been notified?

2. Are there team/staffing issues? If yes, what is the action plan?

3. Is this project on budget? If no, what is the action plan?

4. Are there any new requirements?

5. Are there any scope change request pending?

6. Is the customer satisfied? If not, what is the action plan?

7. What is the EAC (Estimated Cost at Completion)? How did you arrive at your EAC?

8. How is the cash flow?

Summary Lessons

1. Adopting the Project Management Process **is** a major paradigm shift for you and your company.

2. Plan the work – work the plan!

3. Recognize and deal with resistance to change.

4. Key steps to implementation are:

- Establish the Project Management Process:
  Know where you are going, how you are getting there and when you have arrived.

- Adopt the right organization structure:
  With clear responsibilities, accountability and authority.

- Match the right people for the right job:
  People are the key to Successful Implementation.

- Allow adequate time for planning:
  Who does What for How Much and When.

- Ensure that cost accounts, reports and work packages are properly sized:
  Must be manageable, have organizational accountability and be realistic in terms of effort, time and costs.

- Work at assuring that information is realistic and shared:
  Poor communications is the greatest contributor to project difficulties.

- Be willing to re-plan:
  The best-laid plans go astray, change is inevitable.

- Long before the project ends, plan for the end.
  Audit for lesson learned, plan for reassignment of personnel, disposition of resources, and transfer of knowledge.