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Interpreting Team Data

Exercise

TSP Team Member Training  
Software Engineering Institute

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Interpreting Team Data

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| **Question #1: What is the current schedule status?** |

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|  | Note that after nine weeks, the team has only completed 34.5% of their work. But the plan indicates that they should have completed 43.6% by Week 9.  The project is currently behind by:  43.6 – 34.5 = 9.1 EV  After nine weeks, the EV rate is:  34.5/9 = 3.8 EV per week  Therefore, the project appears to be behind by:  9.1/3.84 = 2.4 Weeks |

Based on current performance, the project will complete during **week 26**. This estimate is based on the following:

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| Description | Calculation |
| The amount of EV yet to earn on the project | 100 – 34.5 = 65.5 EV |
| The remaining estimated time in the project | 65.5 / 3.8 = 17.2 ≈ 17 weeks |
| The estimated week for completion, given that we are at week #9 | 9 weeks + 17 weeks= 26 weeks |

If considered alone, the comparison of earned value to planned value would lead you to believe that the project is seriously behind in schedule.

However, the key to arriving at the correct conclusion about the schedule status is to realize that no single measure is sufficient for determining project status. Instead, it is important to examine the project performance measures together and to draw conclusions from the set of indicators.

Therefore, additional analyses should be conducted as detailed on the following pages.

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|  | This chart shows that the project effort grew by  3834.5-3765.1 = 69.4 hours  Based on information in slide 6, the average planned task hours per week is  1777 hrs / 9 weeks = 197 hrs/week  Therefore, based on the effort growth indicator alone, one might postulate that the project has slipped by  69.4/197 = 0.35 ≈ 1/3 week |

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|  | The project team has put in 229.9 hours less than it had planned.  The average planned task hours per week is 197 hrs/week. Therefore, if considering this indicator only, then the shortfall in actual hours on task implies that the project is behind by approximately  229.9/197 = 1.2 weeks |
|  | For “tasks completed to-date,” the planned estimate was actually very close to the actual. The overestimate was only 3%.  The overestimate is  1323.8 – 1279.3 = 44.5 hrs  With the team averaging approximately 171.9 hrs/week,[[1]](#footnote-1) the impact of the overestimate amounts to  44.5/171.9 = 0.26 weeks  Based on this indicator, the team is about ¼ week ahead of  schedule. |

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|  | As noted on a previous chart (slide #4), the EV to-date is 34.5% while the PV is 43.6%. So, the team certainly appears to be behind schedule based on the EV indicator.  However, note the chart to the left which indicates the erratic profile of EV/PV. There is a spike in the EV at three-week intervals. This trend is atypical and cause for additional analysis to understand the possible cause of the EV spiking pattern. |

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|  | **Possible explanation of spiking**  The cause of the EV spiking pattern might be explained by the Tasks-In-Progress chart. There are  1547.1 – 1279.3 = 268 hours  that are locked up in unfinished tasks.[[2]](#footnote-2) If these unfinished tasks are close to completion, then the earned value would be  Current EV + Potential EV  34.5 + 7.2 = 41.7 EV |

The unrealized EV represented in the unfinished tasks can be calculated from information in the chart.

268 \* 0.027 EV/hr = 7.2 EV

Note that if this EV was *realized* in the near future, then this would indeed bring the team closer to the planned value of 43.6. So, if a majority of the unfinished tasks are close to completion, then this would be positive and the team is not far behind schedule. (However, one should never make such optimistic assumptions.) Thus far, the completed tasks to-date have been over-estimated.[[3]](#footnote-3) If this holds true for the uncompleted tasks, then this would support the notion that the team might be close to completing the tasks and thus earning the value.

**Summary**

In summary to Part 1, the key to addressing the question is to realize that no single indicator should be relied on alone to indicate project status. Instead, one must consider the set of indicators to provide the best view of project status.

If we consider all indicators we find the following:

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| --- | --- |
| Indicator | Weeks behind schedule (weeks) |
| Earned value | 2.4 |
| Effort growth | 0.3 |
| Task hours to-date | 1.2 |
| To-date task hours for completed tasks | - 0.2 |

The project is indeed behind schedule based on an examination of all indicators (likely 1.2 to 2.4 weeks behind schedule).

Based on this analysis, some of the schedule slip could be regained by fixing the problem the team is having with bringing some of their tasks to closure. Another way to address the schedule slip would be to find ways to promote more task time on the part of team members.

In this particular case, earned value may not be the best indicator due to the amount of uncompleted task hours that are locked up. This is an optimistic viewpoint but it could be realistic. If it is, then the project is probably behind about one week. But, for reporting purposes, it would be intellectually honest to say that the project is one-to-two weeks behind schedule.

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| **Question #2: Is there information that you think is missing from the briefing? List the information that you think should be included but was left out.** |

A graph showing cumulative planned value and earned value from the project start date (or cycle) should be included in the briefing charts. This would provide the big picture of what has been occurring since project start.



1. From slide 6, the task hours-to-date is 1547.1 hrs / 9 weeks = 171.9 weeks. [↑](#footnote-ref-1)
2. Recall that value can only be *earned* when a task has completed. There is no credit for unfinished tasks. [↑](#footnote-ref-2)
3. Note on Chart #7 that completed tasks were over-estimated by 3%. [↑](#footnote-ref-3)