IT PROJECT MANAGEMENT

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Controlling Your Software Project

Controlling Project Costs

Forecasting variance

If you know your earned value (EV) and you know your actual cost (AC), then you can calculate your cost variance (CV). Here's the least you need to know:

- To determine the AC, simply add up all the costs for the time that you are measuring.
- To determine the EV, look at the amount you budgeted for the work your team has completed at a particular time in the project schedule.
- To determine the CV, subtract the AC from the EV (CV = EV – AC). This difference is how much you vary in the costs that you expected to incur now and your actual costs for the same time.

Controlling the Project Schedule

Controlling the Project Schedule

- Spoke to project managers who had managed similar projects
- Gathered requirements from appropriate stakeholders and worked with them and your project team to prioritize and sequence the tasks
- Built the schedule from the ground up focusing on each of the project activities, their definition, their sequencing, and estimating their durations
- Considered the appropriate resources required to complete the project successfully in the desired timeframe
- Built in contingency time if a phase of the project runs over
- Created a schedule management plan that defined how you would control the project schedule and manage project time variances

Managing project time variances

You created an extremely thorough work break down structure (WBS), you spoke to the appropriate people to gather their insight and wisdom, you spent a suitable amount of time gathering requirements, and you created your project network diagram.

- Using the project schedule as an input to compare your actual results with your plan.
- Using your performance reports (part of your communication plan) as an input to compare where you are in the schedule with where you planned to be in the schedule.
- Looking at your approved change requests to determine whether the changes that have been approved and implemented have impacted your timeline.
- Reviewing the schedule management plan to specify how you will track and monitor changes to the schedule

Some of the other tools you might use to manage and monitor schedule variances include the following:

- **Schedule change control system:** Devise a system (spreadsheet, database — whatever works for you and your project) where you can receive schedule change requests, assess their impact and value, and document their acceptance or denial. This doesn't have to be something fancy or technical; it just must be a process that works for your project.
- **Performance measurement methods:** Use these to produce your sched ule variance and Schedule Performance Index (SPI). The bottom line is that these numbers, your schedule variance and SPI, will tell you how big of a deal a particular change really is and will help you determine if you need to take corrective action.
- **Variance analysis:** Use this to determine whether where you planned to be in the schedule is the same as where you really are in the schedule. This will also help you in determine what (if any) corrective action to take.

Estimating impact of change on the project schedule

- **What happens to the project if we don't implement this change?** For example, if you don't implement the change, and something you need won't function, this change could have a higher priority than other changes.
- **What are the implications for the system testing if we do implement this change request?** In other words, when you implement a change to your software project, you not only have to test that code, but you need to test other areas of your application that may be affected. Also, you need to extend the schedule to accomplish all the testing.
- **If we implement this change, what other areas of the actual project will we be affecting?** Consider each of those areas to determine whether you need to change the project schedule.

Estimating impact of change on the project schedule

- **Are there other changes in the project that I can implement to reduce the impact of this change?** For example, if you move forward with this change, you can prevent schedule delays by adding a programmer to a portion of the project.
- **Is there enough positive impact in implementing this change that can counteract the negative implications?** For example, maybe you add three weeks to your schedule, but the actual change will increase the value of the product.

Forecasting schedule variances

There are some similar formulas to use for forecasting schedule variances. Here they are:

- If you know your planned value (PV) and you know your earned value (EV), then you can calculate your schedule variance (SV).
- Your PV indicates, for a particular period, how much work was supposed to be completed.
- Your EV indicates the work that was really completed during a particular period. To determine your SV, you subtract your PV from your EV (SV = EV – PV). This difference is how much you vary in where you are in the schedule compared with where you expected to be for the same period.