Lesson Proper for Week 10

Defining Activities

The activity definition process is a further breakdown of the work package elements of the WBS. It documents the specific activities needed to fulfill the deliverables detailed in the WBS. These activities are not the deliverables themselves but the individual units of work that must be completed to fulfill the deliverables. Activity definition uses everything we already know about the project to divide the work into activities that can be estimated. You might want to look at all the lessons learned from similar projects your company has done to get a good idea of what you need to do on the current one.

Expert judgment in the form of project team members with prior experience developing project scope statements and WBS can help you define activities. If you are asked to manage a project in a new domain, you might also use experts in that particular field to help define tasks so you can understand what activities are going to be involved. You may want to create an activity list and then have the expert review it and suggest changes. Alternatively, you could involve the expert from the very beginning and ask to have an activity definition conversation with him or her before even making your first draft of the list.

Sometimes you start a project without knowing a lot about the work that you'll be doing later. Rolling-wave planning lets you plan and schedule only the portion that you know enough about to plan well. When you don't know enough about a project, you can use placeholders for the unknown portions until you know more. These are extra items that are put at high levels in the WBS to allow you to plan for the unknown.

A Case Study

Susan and Steve have decided to tie the knot, but they don't have much time to plan their wedding. They want the big day to be unforgettable. They want to invite many people and provide a great time. They've always dreamed of a June wedding, but it's already January. Just thinking about all of the details involved is overwhelming. Susan has been dreaming of the big day since she was 12, but it seems that there's so little time for all the tasks to be completed. When they were choosing the paper for the invitations, the couple realized that they needed help.

Susan: Steve, we need some help.

Steve: Don't worry. My sister's wedding planner was great. Let me give her a call. [Steve calls the wedding planner Sally.

Wedding Planner: Hello Susan and Steve.

Steve: We want everything to be perfect.

Susan: There is so much to do! Invitations, food, guests, and music.

Steve: Oh no, we haven't even booked a place!

Susan: And it has to be done right. We can't print the invitations until we have the menu planned. We can't do the seating arrangements until we have the RSVPs. We aren't sure what kind of band to get for the reception, or should it be a DJ? We're just overwhelmed.

Steve: My sister said toy really saved her wedding. I know she gave you over a year to plan.

Steve: But I've always dreamed of a June wedding, and I'm not willing to give that up. I know it's late, but Sally can you help us?

Wedding Planner: Take it easy, guys. I've got it under control. We've a lot of people and activities to get under control. You guys really should have called six months ago, but we'll still make this wedding happen on time.

Much work has to be done before June. First, Sally figures out what work needs to be done. She starts to put together a to-do list:

• Invitations

• Flowers

• Wedding cake

• Dinner menu

• Band

Since many different people are involved in the making of the wedding, it takes much planning to coordinate all the work in the right order by the right people at the right time. Initially, Sally was worried that she didn't have enough time to make sure that everything would be done properly. However, she knew that she had some powerful time management tools on her side when she took the job, and these tools would help her to synchronize all the required tasks. To get started, Sally arranged all the activities in a work breakdown structure. The next exercise presents part of the WBS Sally made for the wedding.

Creating the Gantt chart

A Gantt chart is a type of bar chart, developed by Henry Gantt, which illustrates a project schedule. Gantt charts are easy to read and are commonly used to display schedule activities. These charts display the start and finish dates of the terminal elements and summary elements of a project. Terminal elements and summary elements comprise the work breakdown structure of the project. Some Gantt charts also show the dependency relationships (i.e., precedence network) between activities.

Gantt charts show all the key stages of a project and their duration as a bar chart, with the time scale across the top. The key stages are placed on the bar chart in sequence, starting in the top left corner and ending in the bottom right corner. A Gantt chart can be drawn quickly and easily and is often the first tool a project manager uses to provide a rough estimate of the time that it will take to complete the key tasks. Sometimes it is useful to start with the target deadline for completion of the whole project, because it is soon apparent if the time scale is too short or unnecessarily long. The detailed Gantt chart is usually constructed after the main objectives have been determined.

Creating the Network Diagram

Many project managers use network diagrams when scheduling a project. The network diagram is a way to vis the interrelationships of project activities. Network diagrams provide a graphical view of the tasks and how th relate to one another. The tasks in the network are the work packages of the WBS. All of the WBS tasks must be

included in the network because they have to be accounted for in the schedule. Leaving even one task out of the network could change the overall schedule duration, estimated costs, and resource allocation commitments.

The first step is to arrange the tasks from your WBS into a sequence. Some tasks can be accomplished at any time throughout the project where other tasks depend on input from another task or are constrained by time or resources.

The WBS is not a schedule, but it is the basis for it. The network diagram is a schedule but is used primarily to identify key scheduling information that ultimately goes into user-friendly schedule formats, such as milestone and Gantt charts.

The network diagram provides important information to the project team. It provides information about how the tasks are related where the risk points are in the schedule, how long it will take as currently planned to finish the project, and when each task needs to begin and end.

The Critical Path

The critical path describes the sequence of tasks that would enable the project to be completed in the shortest possible time. It is based on the idea that some tasks must be completed before others can begin. A critical path diagram is a useful tool for scheduling dependencies and controlling a project. In order to identify the critical path, the length of time that each task will take must be calculated.

◄ Preliminary Activity for Week 10

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2nd Semester Enrollment

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