

Project Schedule

by Sophia



WHAT'S COVERED

In this lesson, we'll discuss the project schedule, specifically focusing on:

1. Project Schedule

It's the project manager's responsibility to determine the time that it will take to complete all work included in the Work Breakdown Structure (WBS), and this is done through the **project schedule**.

When the schedule is complete, it should reflect the sequence in which work will proceed, who will perform the work, and the time required to complete all the deliverables.

➞ **EXAMPLE** A group must modify an organization's website to add the ability for a customer to submit a complaint form. A few of the tasks may be survey customers, design modules, design form, program modules, program form, and test form.



TERM TO KNOW

Project Schedule

The time required to complete all of the activities and tasks within a project.

2. Factors Impacting Project Schedule

When creating the schedule for a project, four interrelated factors will require research and management associated with all the tasks.

- Resources
- Time and Effort
- Dependences
- Quality

2a. Resources

With people resources, it is important to ask the following questions:

- Who will complete the work?
- How much time can each person devote to a project?
- What is each person's expertise?

For non-people resources, questions to be asked include:

- What equipment and materials are needed?
- Will the equipment and materials be available when the project needs them?

2b. Time and Effort

Time is the duration of the tasks in calendar days. **Time estimating** is the process of estimating the duration of each task or activity.

Effort is the actual hours, days, or weeks required to complete the task. **Effort estimating** is the process to determining the amount of labor (hours) that is required to complete each task or activity.

➔ **EXAMPLE** A task takes eight hours to complete, but the resource can only devote four hours per day. The effort on the task would be the eight hours, but the time on the task would be two days.



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Time Estimating

The process of estimating the duration of each task or activity.

Effort Estimating

The process to determining the amount of labor (hours) that is required to complete each task or activity.

2c. Dependencies

Dependencies change the schedule when added, and involve questions such as:

- In what sequence must work be performed?
- What work must be completed before other work can be completed?

2d. Quality

Higher quality often results in more time spent on task, so this must be considered before the schedule is finalized. Therefore, the following questions to ask regarding quality are:

- What is the level of quality needed on each deliverable?
- How will the level of quality impact the time and effort needed to complete the work?

3. Completing the Project Schedule

Once resources have been assigned to tasks, and estimates have been received from those resources for the time and effort involved to finish the work, then the initial schedule is complete.

At this stage, the project manager must review the schedule and attempt to identify any outstanding issues. A project manager should ask the following questions:

- Are all activities and tasks identified and adequately estimated to achieve project deliverables?
- Does the schedule include all activities required to keep the project moving forward?
- Does the **critical path** finish in the time allotted for the project?

The critical path is the longest string of depended tasks within the schedule.



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Critical Path

The longest string of dependent project activities and tasks required to complete a project in the shortest amount of time.

4. Communicating the Project Schedule

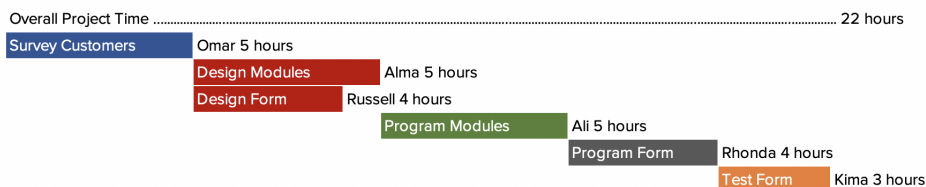
When questions are answered positively, a schedule is fully complete, and the project manager must then present it to the stakeholders and the team members.

Because it might be difficult for others to visualize how the work will proceed, the project manager should use methods to make the schedule more understandable.

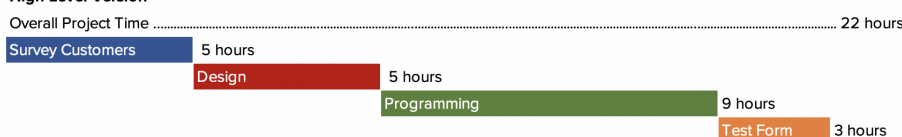
One such method is a **Gantt chart**, which displays the sequence of activities, dependencies, and resources assignments in a visual manner that is easier to understand.

For our example project, a Gantt chart might look like this:

Gantt Chart



High Level Version



For some stakeholders and team members, the project manager might create an even simpler version of the schedule that has only high-level tasks and activities. The project manager might also give team members only the portion of their schedule that contains the task for which they're responsible.



BRAINSTORM

Consider projects you've worked on in the past. Can you think of a time when a Gantt chart could have been a useful scheduling tool? Which tasks would be your responsibility?



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Gantt Chart

A graphical display of the scheduled work within a project.



SUMMARY

In this lesson, you learned the factors that impact a **project schedule**. Four interrelated **factors** require questions and management:

- Resources, both people and non-people
- Time/Effort, such as calendar days and specific hours
- Dependencies that lead to the critical path
- Quality, which signals the level of quality expected.

When presenting to stakeholders, the Gantt Chart may be a good model to use for visual communication of the tasks associated with the project. Now you know how to **complete a schedule**, and then **communicate that schedule** to others.

Source: This work is adapted from Sophia Author Jeff Carroll.



TERMS TO KNOW

Critical Path

The longest string of dependent project activities and tasks required to complete a project in the shortest amount of time.

Effort Estimating

The process of determining amount of labor (hours) that is required to complete each task or activity.

Gantt Chart

A graphical display of the scheduled work within a project.

Project Schedule

The time required to complete all of the activities and tasks within a project.

Time Estimating

The process of estimating the duration of each task or activity.