Use Fixed Duration, Fixed Work and Fixed Unit Type Fields

After the project manager and other stakeholders understand the project scope, the project can be decomposed into manageable chunks and individual tasks with time estimates.

Estimates are predictions of task effort and duration. MS-Project supports different task types including Fixed Duration, Fixed Work and Fixed Unit types. It is important to understand these project types and how they interact with MS-Project. Creating a project plan with a mix of fixed work and fixed duration tasks is recommended. The MS-Project Type field allows the project manager to create a well-defined project plan with status meetings and reviews built into the project schedule. The plan becomes a more accurate representation of project execution.

A typical project includes tasks that are effort driven and duration driven. A project manager may include duration task types such as milestone reviews after each lifecycle phase. Since these milestones are dependent upon the work in each phase, it is helpful to include them in the plan to organize and communicate project status. These meetings are added to the project plan with a Fixed Duration task type. Any team status meeting, project milestone review or code review meeting is a fixed duration task. A one-hour team status meeting has a one-hour fixed duration regardless of the number of resources attending the meeting. The amount of work will fluctuate depending on the number of attendees.

Writing a project charter document, coding a software program or building a detailed project plan are fixed work tasks. The Fixed Work task type is useful when team members provide estimates by task. A task to develop a report is estimated at 40 hours with one team member assigned. The amount of work is fixed at 40 hours and the duration changes depending on the team members’ availability. If the team member is available 100 percent of the workweek, the report should be completed in five days.

MS-Project uses the following formula to calculate duration, resources (units) and effort.

\[ \text{Duration} \times \text{Units} = \text{Work} \]

MS-Project expects the user to provide two of the inputs and MS-Project calculates the third. To view these fields and the impact of Task Types, additional fields need to be added to the Task Entry View.

To create a fixed Duration task:

1. Insert the Type field into the Gantt Chart view
2. Enter the task name
3. Change the Type field to Fixed Duration
4. Enter the Duration
5. Enter the Resources
6. Effort will be calculated by MS-Project

To create a fixed Work task:

1. Insert the Type field into the Gantt Chart view
2. Enter the task name
3. Change the Type field to Fixed Work
4. Enter the Effort in the Work field
5. Enter the Resources
6. Duration will be calculated by MS-Project

A helpful reminder in the \textbf{Duration X Units = Work} is to pick two of the variables (duration, units, or work) and let Microsoft Project calculate the result. Remembering this tip will help you avoid the resource overallocation frustration as the variables change as you enter a resource allocation of 100\% and then try to adjust both duration and work. Experiment with these task types to understand the relationship duration, units and work share in MS-Project. Including these task types in the plan will develop a more realistic plan that reflects actual execution and gain better control over key dates and milestones.