Tips for Effective Schedule Development & Management

These tips assume the reader is proficient in the use of Microsoft Project as well as with generally-accepted scheduling terminology and practices. These tips are provided to facilitate dynamic scheduling techniques, which align with proven principles and practices promoted by the Project Management Institute (PMI®). The purpose of this document is to assist in the development of project schedules that contain a clearly-defined critical path, accurately represent project progress and performance, and provide credible project end dates. These tips should not only improve confidence levels in the project schedule, they should also take some of the guesswork out of managing the actual work of the project.

General Project Setup

1. Ensure the Master Project Schedule includes all tasks required to complete the entire scope of work.
2. Ensure state holidays are identified in the Standard Calendar.

Rolling Wave and Detailed Planning

1. The schedule should be detailed for all activities that fall within 6 months of the status date in a continuous rolling wave. For example, at the start of January, tasks for the months of January through June shall be detailed; at the start of February, tasks for the months of February through July shall be detailed, and so forth.
2. Using a custom text field entitled "Detail Level" is recommended to distinguish Rolling Wave activities from the detailed part of the schedule. Use the following labels: Detailed, Inside Rolling Wave, and Outside Rolling Wave. Tasks should be elaborated as follows within each planning window:
   a. Detailed Planning Window: Within the 6-month, detailed planning window, subtask durations should follow the 8/80 rule (see Task Durations section).
   b. Inside Rolling Wave Planning Window: Within the 6-month to 12-month Rolling Wave planning window, subtask durations should not exceed 20 days.
   c. Outside Rolling Wave Planning Window: Beyond 12 months (including future fiscal years), subtask durations should not exceed 60 days.

Schedule Activities

1. Manual Tasks and Auto-Scheduled Tasks
   a. Set the default for new tasks to Auto-Scheduled. Limit the use of Manual Tasks, as these are not driven by the scheduling engine.
2. Summary Tasks
   a. No resources should be assigned to summary tasks.
   b. No costs should be assigned to summary tasks.
   c. No predecessors or successors should be assigned to summary tasks.
   d. No date constraints should be applied to summary tasks (keep the default "As Soon As Possible").
3. Subtasks (i.e., tasks, detailed tasks, activities)
   a. Subtasks should start with an action verb (e.g., prepare, review, configure, test).
   b. Subtasks are not marked as milestones unless they are converted to a project milestone with zero duration.

4. Milestones
   a. All milestones should have zero duration and be clearly identified as a milestone task type.
   b. No resources should be assigned to milestones.
   c. No costs should be assigned to milestones.
   d. All milestones should have at least one predecessor (unless it is the Start milestone).
   e. All milestones should have at least one successor (unless it is the last line of the schedule).
   f. No date constraints should be applied to milestones (keep the default "As Soon As Possible").
   g. The Milestone checkbox should always be checked for milestones.

5. Recurring Tasks
   a. The use of Recurring Tasks is recommended for routine project support and administration activities, such as status reports, team status meetings, invoice processing, etc. Avoid using normal (non-recurring) subtasks and milestones for these types of activities.

Task Durations

1. Ensure the duration time unit is set to "days." Avoid using partial day durations (e.g., 0.5 days).
2. Avoid manually entering start and finish dates; doing so places constraints on subtasks. Start and finish dates should be determined by the schedule's network logic and task durations.
3. Subtask durations should generally follow the 8/80 rule, where detailed planning subtasks do not have durations less than 1 day (8 hours duration) or greater than 10 days (80 hours duration).
4. Estimated durations (e.g., "10 days?") should only be used within the Rolling Wave Planning Windows. Avoid using estimated durations in the Detailed Planning Window of the schedule.

Resources

1. In the Resource sheet, Maximum Units should not exceed 100% for each full-time-equivalent (FTE) resource.

2. Avoid overstating resource availability (e.g., by setting Maximum Units at 1,000% for an individual or for a small team of 2 or 3 people); doing so bypasses MS Project’s ability to detect and display over-allocated resources, thus leaving that risk undetected.
3. Resources should be assigned to subtasks only (not to summary tasks or milestones). All subtasks should have at least 1 resource assigned.
4. Each resource should only appear once in the Resource Sheet. Make sure individually-listed resources are not duplicated by also being a member of a resource group.
5. It is recommended that individual resource calendars reflect when a team member is out for 3 days or more.

Baselining the Schedule

1. The schedule should be baselined before applying any status values (e.g., % Complete) to any activities.
2. Before creating the initial baseline, it is recommended that:
   a. The schedule should be developed at a detail level at least 6 months out from the status date (see Rolling Wave and Detailed Planning section).
   b. All subtasks and milestones have predecessor and successor logic, and the schedule logic is continuous with no interruption to the logical sequence of activities, including the activities in the Rolling Wave Planning Windows of the schedule.
   c. All subtasks have resource assignments (see Resources section).
3. The initial baseline should be set when the project team (with its vendor, if applicable) agrees to the work to be performed, and the resourcing and timing of the work.
4. For each monthly Rolling Wave iteration, add the newly detailed tasks to the current baseline by baselining only those new or updated tasks. The project’s approved Change Management process should be followed.
5. The current baseline should always be "Baseline." When rebaselining the entire schedule, save the current baseline to Baseline 1 – 10, accordingly.
6. Avoid rebaselining simply because initial estimates were a little off. Rebaselining only if parameters of the project have changed, such as when the addition or removal of scope or resources (human or financial) impacts the work; and then, only rebaseline using proper change management practices which include documentation of the reason(s) for updating the current baseline or rebaselining the schedule and the associated impacts to the schedule, cost, and benefits realization.

## Work Breakdown Structure (WBS)

<table>
<thead>
<tr>
<th>WBS Level</th>
<th>WBS Number</th>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Project</td>
<td>The Project Summary Task represents 100% of the work of the project.</td>
</tr>
<tr>
<td>2</td>
<td>1.x</td>
<td>Phase</td>
<td>Separates work into individual phases, e.g., Planning, DDI, Phase 1, Phase 2.</td>
</tr>
<tr>
<td>3</td>
<td>1.x.x</td>
<td>Workstream</td>
<td>Separates each phase into individual workstreams, e.g., OCM, Development, Business Process Analysis, PMO.</td>
</tr>
<tr>
<td>4</td>
<td>1.x.x.x</td>
<td>Workstream Track</td>
<td>Further organizes work of individual workstreams into tracks.</td>
</tr>
<tr>
<td>5</td>
<td>1.x.x.x.x</td>
<td>Deliverable</td>
<td>Identifies the discrete deliverables associated with each workstream track.</td>
</tr>
<tr>
<td>6</td>
<td>1.x.x.x.x.x</td>
<td>Task/Activity</td>
<td>Identifies the tasks and activities required to plan and develop each deliverable.</td>
</tr>
</tbody>
</table>

### Task Relationships & Constraints
1. All subtasks (except the first one) should have at least one predecessor.
2. All subtasks should have at least one successor (unless it is the last subtask in the schedule). Routine project administration tasks (e.g., status meetings, invoice processing) do not necessarily need a successor relationship if no other task has a dependency on that administrative activity; however, it is recommended such tasks link to the phase or project completion milestone (or a similar termination point).
3. Task relationships (network logic) should be continuous and unbroken from the beginning to the end of the schedule. Tasks associated with the creation of the project’s product or solution should be linked to preserve the continuity of the schedule’s overall network logic. See Figure 2 - Continuous Task Relationships among Product Development Activities.
4. Avoid using date constraints on subtasks (keep the default “As Soon As Possible”). If necessary, use MS Project’s “Deadline” field to tag tasks with specific target dates.

### Figure 1 – Sample Work Breakdown Structure

### Figure 2 – Continuous Task Relationships Among Product Development Activities