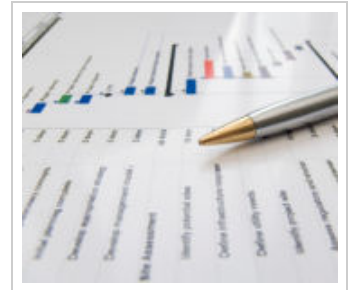


Useful Techniques to Fine-Tune Your Project Schedule

By ExecutiveBrief

Do you have staff sitting idly in the midst of other busy ones? This situation tells you that your project schedule might need fine-tuning.

One of the most common problems that project managers weep about is "unrealistic timelines," a common consequence of clients having set their expectations too high even before the project starts. Ironically, there are occurrences in the duration of a project when a staff member is sitting idly, waiting for a colleague to finish so he can start his own task. In this situation, does the project manager shout foul and blame other people? Chances are, as a project manager, he needs to give the project schedule a second look.



And when he does, what does he look at?

The basic foundation of managing a project is creating an efficient and realistic project schedule. During project planning, the PM is given the chance to give it some fine-tuning. This is the best time for him to be creative as he identifies the best strategy for completing the project. Given that most projects do not have the luxury of time, the project manager's objective is to create the shortest schedule possible without sacrificing its scope and quality.

The Critical Path

Knowing the critical path in a project greatly contributes to determining its delivery schedule. If you want to deliver on time, or shorten the project duration, focus your attention on the critical path. When the critical path is shortened, the project is finished early. When the critical path is maintained, the project is finished on time. When the critical path is extended, the project is delayed. It cannot be overemphasised here that if there is any task or tasks in the schedule that a manager should particularly pay close attention to, it is always those in the critical path.

Identifying your project's critical path requires discipline and maturity. Its accuracy depends on how it is derived. It is quite funny to note that some managers simply stretch the bars in the Gantt chart so that all tasks finish in parallel; doing so simply clouds the entire project schedule and gives no useful information to the manager. Doing the right things and doing them right are two important ingredients to a successful CPM implementation.

Here are some right things done right:

- **Estimate the tasks individually.** Make a list first. Do not put it directly into the Gantt chart because doing so may influence the estimates as you start to consider the timeline. In your list, just put estimates based on the work needed to accomplish the task.
- **Identify the task dependencies.** Some tasks cannot start until prior tasks are finished. Obviously, you can't install a roof over a house with no walls.

- **Create your Gantt chart.** When creating the Gantt chart, make sure you use the original estimates (from step 1) and adjust the task based on dependencies (from step 2). And, like rubbing it in, don't try to schedule putting roof on and building walls in parallel.
- **Identify your critical path(s).** Find the longest path of tasks in the Gantt chart. This defines your critical path. Take note that you may have more than one critical path in your schedule; and not all tasks are part of the critical path.

How do you use CPM to fine-tune your schedule?

Slack Time

Slack time, as the name implies, is the time when one can relax, delay a task but still the project is finished on time. A more formal definition from the Project Management Body of Knowledge (PMBOK) is "The amount of time that a schedule activity can be delayed without delaying the early start of any immediately following schedule activities." Slack time is such an adverse-sounding term that managers tend to remove it in the schedule and present one that does not contain it to impress their bosses or clients. While this may look good on the surface, there are consequences when reducing slack times is not done properly.

For starters, accept the fact that slack times are a normal phenomenon in project schedules. The role of a manager is to identify and minimise them. By identifying the slack time, a manager becomes aware in keeping estimates and dependencies accurate. Once there is acceptance, start thinking of ways to reduce slack times and improve productivity. Determining the best strategy separates experienced managers from the novice, some of the common ways are:

- Give additional tasks to the resource assigned during the slack time.
- Ask the resource to help out in other critical tasks.
- Share the resource with another project.

Crashing

Crashing is the process of fine-tuning your project schedule to shorten delivery time. It is a possible solution when stakeholders ask for a faster delivery while not willing to reduce the scope of work. So, how does crashing work? Simple. Reduce the time to complete the tasks in the critical path. Note that crashing works only on tasks in the critical path because reducing time on non-critical tasks will not affect the project delivery time. Do not waste your time crashing non-critical path tasks; instead, crash tasks in the critical path to get immediate results.


You can think of several ways to crash a task. You can put two resources to work in parallel and have the task completed in half the time. Or you can assign a more productive resource who can finish the work earlier. In any case, make sure you assess the risks. There are tasks that cannot be performed by two persons, like installing software or hammering a nail. Also, make sure you are not over-assigning critical tasks to your best resource, because he can only be 100% productive and anything above it will be counter-productive. It is mindless to assume that your best resource can work 16 hours a day for the next three weeks.

Fast-Track

Another way to shorten your schedule is through fast-tracking. Fast-tracking is the process of rescheduling tasks to be performed in parallel that were originally planned in series. Like crashing, fast-track works on tasks in the critical path. If you reschedule two tasks originally in series to be done in parallel, you are in effect cutting the time to do the task to half. And like crashing, fast-track may bring complications to the feasibility of the project schedule. For one, do not fast-track tasks that are strictly interdependent of one another, such as applying a second coat of paint. In doing a paint job, you can't schedule second coating and first coating in parallel, it's just not

possible. Fortunately, there are tasks that can be made parallel such as building the wall and laying down floor tiles; while these tasks may cause complications, these are achievable when done right.

In fine-tuning your project schedule, you can be creative, but be certain that you have calculated the risks in doing so.

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