



Plans on the table

New product development is costly and often difficult to control. Attempts to control it require good project management and the generation of a project plan.

It is common to come across project plans that provide little or no value. By understanding and learning from these mistakes, simple steps can be taken to ensure that project plans are developed that provide: a trusted and valued prediction of how long a project will take; an accurate picture of the progress of a project; and which give an early warning of task slippage and the impact on project completion.

Here's a sample of the fates that befall a large number of project plans:

- Created in a flurry of activity and initial enthusiasm, then forgotten about because something more important crops up.
- Created, then forgotten about until an important milestone is missed, at which

Every project needs some means of charting its progress.

By Graham Cooke.

point they are dusted off, used to point blame and updated.

- Created in great detail and modified frequently, so they are only accurate for tasks that will be completed in the next few days.
- Created in isolation by an individual who doesn't understand the design process, task dependencies or the accuracy to which each engineer can predict task timescales.
- Ignored completely, because they are not understood or trusted.

What goes wrong to produce these scenarios and what can be done to avoid them? One of the main reasons is that

there is no clear understanding across the organisation of projects and project plans.

Ask a cross section of any organisation what a project is and you won't get a consistent answer. It is rare that people will include the key points of what defines a project – such as a collection of activities, unique temporary goal, specific performance requirements and time/cost constraints. Often, no more than a handful of people have had any training in project planning and management.

Organisations can also be guilty of producing a plan without defining the project goal. If a project plan is not based on a clear goal or tries to combine multiple goals, then the resulting confusion in its scope will present opportunities for error in its interpretation.

Another fault is producing a plan without generating a work breakdown structure (WBS, see figure 1). If a project plan has been produced without

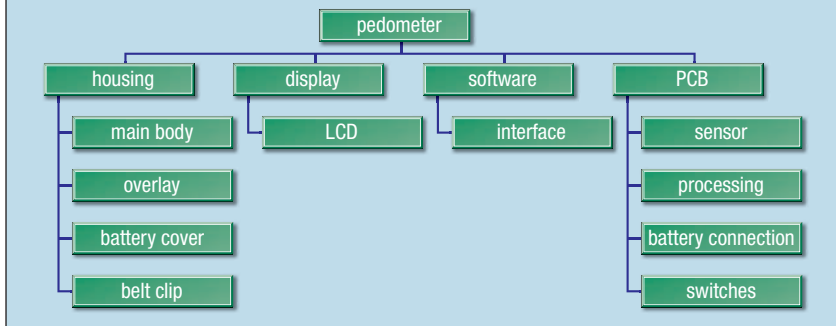


first producing a WBS, then it is quite possible that the project plan will miss important activities or include activities that are not part of the project

Assigning inaccurate timescales to tasks in the plan is another weakness. Most engineering tasks in any product plan will have inaccurate timescales associated with them. This is often due to a lack of understanding of project management and the scope of the tasks being estimated. Additionally, engineers with the most experience of the tasks are often not consulted.

Some plans can feature detailed scheduling of activities too far in the future. How accurate can a schedule be for tasks that will not be started for many months? It takes considerable effort to produce a complete project plan that includes every activity at the lowest level of the WBS. As the project progresses, adjustments to the scheduling of these tasks are almost inevitable, alterations to

Figure 1: Example of a low level work breakdown structure



Simple solutions

What can be done to make sure these mistakes are not repeated?

- *Train everyone in project planning.* It only takes a day to ensure the team understands the concepts of project planning and the value of a well constructed plan. Perception of the process of creating a plan can vary drastically from one person to another, so normalising this is valuable.

achieved in a few hours, but not days.

- *Break the generation of the plan into multiple smaller batch exercises.* The WBS and the time constraints on the project can provide a basis for an initial schedule. At first, schedule only the tasks at the lowest point on the WBS that fall within the first 10 to 20% of the project. For tasks that will be carried out beyond this time horizon, take the next level up the WBS and create summary tasks with intelligently estimated timescales. Towards the end of the initial detailed schedule horizon, produce a similar schedule for the next 20%.

Continue this process throughout the project's life, adding more detailed schedule information to summary tasks.

- *Generate accurate timescale estimates.* Use these golden rules: make sure each task being estimated is defined and scoped clearly; engage engineers in the estimation of timescales; and remember that a group view of an engineering timescale is often more accurate.

- *Communicate the progress and status of the project plan.* A good project plan is an effective tool to both report and drive progress of the project. Different communication formats are required for different levels of audience – don't assume that everyone has the time to study a 200line Gantt chart.

By following the above points, a project plan that provides value to NPD activity can be produced and a successful project is much more likely. ■

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"A good project plan is an effective tool to both report and drive progress of the project."

Graham Cooke, NPD Express

the task interdependencies are often necessary and, occasionally, it may be necessary to add, remove or alter the definitions of the tasks.

It is also a sin to update a project plan too frequently; if you do, it will soon be of little value. At the outset, a project plan should reflect a likely outcome. Slippages and failures to meet milestones should be a rare exception, not the norm. If the plan needs updating on a daily basis, then it will soon become a record of the project with a forward time horizon of a few days. Most organisations don't have the luxury of a dedicated project manager who can spend every working hour updating the project plan. More often than not a product manager, senior engineer or engineering manager will have to take responsibility for the project plan – so is updating a plan on a daily basis a good use of their time?

- *Define and communicate the scope and goal of the project clearly.* It is vital to have a clear definition of the scope and goal of the project. The unique temporary goal must be identified unambiguously, along with the specific performance requirements and time/cost constraints. These must then be communicated clearly to everyone involved in the project. Producing laminated copies of a 'project manifesto' highlights the importance of this clear definition. Consider also extending communication to other parts of the organisation.

- *Create a comprehensive WBS.* Once a common understanding of project planning and the scope/goals of the project is achieved, it is then important to create a comprehensive WBS by carrying out a well facilitated group exercise. For most projects, this can be