SECOND EDITION

'Still the best beginner's guide to project management. I know many experienced project managers who would benefit from it!'
Pat Graham, CEO, Trivaeo

Project Management
Step by Step

How to Plan and Manage a Highly Successful Project

Richard Newton

Project Management
Step by Step

How to plan and manage a highly successful project

Second edition

Richard Newton

Developing a Project Plan is explained through a detailed example in the section of this chapter titled 'The step-by-step guide'. The approach presented can be used for simple and complex projects. To ensure that all the different considerations in developing a Project Plan are covered, the example is slightly more complex than in the previous chapters. This is because planning is probably the most unfamiliar task to those new to project management. If you take the time to understand this chapter, you will see the approach explained is straightforward. Having grasped it, you will understand the most complex part of this book.

> **THE CENTRAL POINT IS:**
>
> • **Project management is concerned with ensuring you achieve your objectives to a predicted time and cost. The basis for doing this is to understand clearly how you will do your project. This understanding comes by developing a Project Plan.**

Setting the scene

Imagine that you are about to sign a contract with one of your suppliers to do some work for your business, perhaps developing new software or re-fitting a chain of shops. Alternatively, in your private life you may ask a builder to do some work on your house. Whichever example you consider, you are about to ask the supplier to do a project for you. Imagine you have already agreed what this project will deliver using the approach described in Chapter 2. You know you will get what you want. What more information do you want from the supplier before you commit to the contract? The most important questions you will have usually are: 'How long will this work take?' and 'How much will it cost?'

Instead of thinking about someone doing a project for you, imagine you are doing a project for someone else. They want to know how

long you will take and how much you will charge. To answer these questions you need to understand how you will do the project and how much it will cost. The answers to these questions are found by developing a Project Plan.

Project Plans do not always provide the answer you want to hear. For example, you may have a condition that the project is to be completed by the end of May, but a plan shows it will take until the end of July. Alternatively, you may have a maximum of £100k to spend on your project, but a plan shows it will cost £250k. The Project Plan enables you to check that you can do the work within the conditions defined, and that it makes sense for you to do it.

Project Plans sit at the core of managing projects and so this is the longest chapter in the book. You may find it best to read this chapter a bit at a time, rather than trying to go through it all in one go. There are lots of tables in this chapter which makes it look more complex than it is. Don't be intimidated by the tables: in reality, there is one main table, which is built up in steps and so is shown several times as each step builds up.

Good planning enables a project manager to take the understanding of what is to be delivered and reliably make this happen to a predicted cost and time. Doing any complex task without planning first means you do not know how long it will take and how much it will cost – and such predictability is often essential. More critically, without a plan your ability to meet the original objectives of the project (the 'why' and the 'what') is uncertain. Without a plan you are stepping out into the dark.
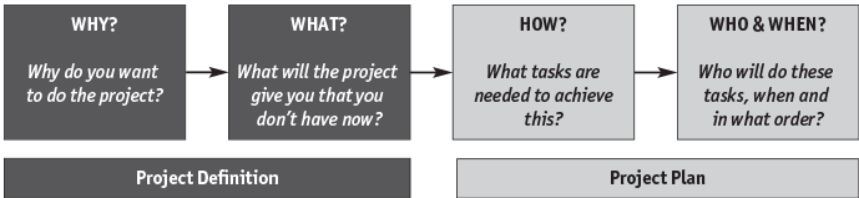
The logic of project management

Introduction to the Project Plan and estimating

The next few pages of this chapter provide an introduction to project planning and estimating. They present the information you need to understand before you create your Project Plan. The subsequent section then applies this knowledge and presents the actual steps to develop a plan through a detailed worked example.

How you will do your project and achieve your objective is defined in the Project Plan. At one level, a Project Plan is just the list of tasks you need to do to complete your project. Essentially, this plan shows the order of the tasks, the length of time each task will take, and who is responsible for doing each one. The plan is used for many things, but most importantly:

- It enables you to understand how long a project will take, and how much it will cost to do.
- It provides information you can use to explain the project to other people.
- It allows you to allocate work to different people in the project. A plan is as much a tool for work allocation and management of people, as for understanding the length of time it will take.
- It is the basis for managing your project to a successful completion (as will be described in Chapter 4).

Professional project managers have a huge set of tools and usually some helpful experience to produce plans. The work to produce the plan for a major programme of work requires skill and expertise, but the fundamental activities in producing a plan are not that complex and are easy to apply for reasonable-sized projects. Planning builds on the normal human approach of breaking problems that are too large to resolve in one go into smaller chunks. This process is called decomposition by project managers.

I am first going to define the logical activities in producing a plan, and then I shall describe how to create a plan in practice. The six activities in producing a plan are to:

1. Divide the overall project into its component tasks, and continue to divide the component tasks into smaller tasks until you have a comprehensive list of things that must be done to complete the project.
2. Estimate the length of time each task will take.
3. Order the tasks into the right sequence.
4. Determine the people, money and other resources you need to do the tasks in the plan.
5. Check what resources are available and refine your plan to take account of this. Once you have done this you have a complete plan.
6. Review the plan – does it match your needs? Looking at the plan – can you actually do it, and should you do it?

The six activities are shown here as a simple logical sequence. In practice, you will go through these activities several times before your plan is in a state you are fully happy with. Before you start to develop your plan, I introduce these topics in more detail.
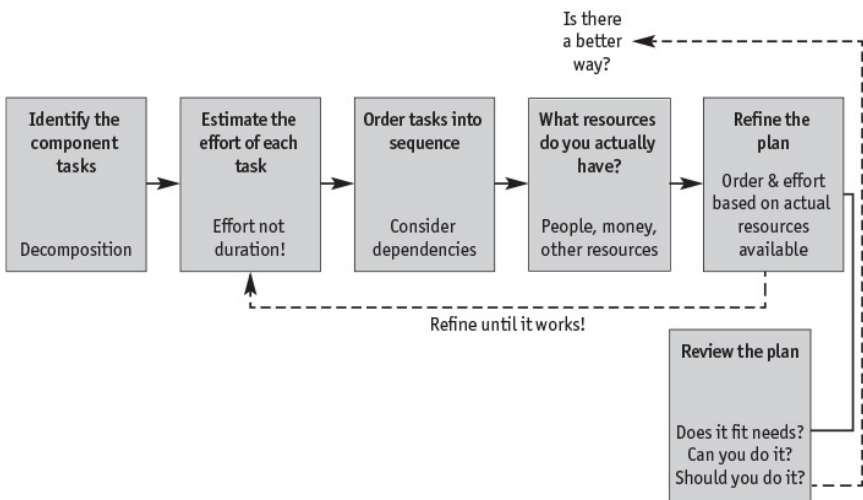
The logic of project planning

The component tasks and milestones

Breaking big activities into component tasks is something we all do all the time. Whether it is as simple as planning a trip to London – thinking about the tasks of driving to the station, taking the train to Paddington, and then using the Underground to the final destination – or a complex activity that breaks into hundreds of tasks, decomposition is something we all do naturally. However, in a project it is generally more complicated than the activities you are familiar with on a day-to-day basis.

Breaking down a major project into the relevant tasks requires clear thinking and effort. Determining the task breakdown enables you to bring experience to bear, whether it is your own or anyone else's familiar with the type of project you are planning.

People new to project planning often struggle to understand what level of detail to go into in breaking tasks down. This is a subjective judgement and there are no hard and fast rules, but remember the purpose of the plan: you are creating a structure whereby you can estimate times and costs, allocate work to people and manage delivery. You are not defining a detailed step-by-step instruction for carrying out each of the tasks in the plan. The questions to ask once you have broken your work into its component tasks are:

- Is it enough to help you manage and allocate the work?
- Does the detail help you estimate and schedule the project?

Consider three different task breakdowns for a decorating project (Table 3.1).

The information in the left-hand column is not sufficient to work out the cost and time to do the project. On the other hand, that in the right-hand column is too much. It's not that it's wrong, just that you don't need this level of detail to plan. The middle column seems about right.

Table 3.1 **Example of task decompositions**

Insufficient detail	Sufficient detail	Too much detail
Decorate room.	Select colour. Buy sufficient paint. Prepare walls. Paint first coat. Paint second coat. Final touch up.	Go to DIY store. Look at the colours available. Get sample pots of paint. Try on wall. Wait for it to dry. Select option. Estimate how much paint you want. Return to DIY store. Buy paint. Survey walls. Identify all bits of walls that need to be fixed. Mark the places to fix. Fill cracks. Fix paper etc.

If your project lasts any length of time, especially if it is over a month and you are inexperienced, it is helpful to add some milestones. Milestones are points in a project that identify when you have completed an important stage of the project. Once you start to manage a project, you will find that the detailed tasks tend to shift around. The milestones should not. They are useful to track progress at a high level and to communicate to people outside of the project – to understand where you are in project progress without needing to know the details. They are not activities in their own right, but reflect the completion of a series of activities and the production of key deliverables. One milestone a month is a good rule of thumb. Examples of possible milestones for three projects are shown in Table 3.2.

***Table 3.2* Examples of milestones**