Introduction

Projects have been around since ancient times. Noah building the ark, Leonardo da Vinci painting the Mona Lisa, Edward Gibbon writing *The Decline and Fall of the Roman Empire*, Jonas Salk developing the polio vaccine – all projects. And, as you know, these projects were all masterful successes. (Well, the products were a spectacular success, even if schedules and resource budgets were sometimes overrun!)

Why, then, is the topic of project management of such great interest today? The answer is simple: The audience has changed and the stakes are higher.

Historically, projects were large, complex undertakings. The first project to use modern project management techniques – the development of the Polaris weapons system in the early 1950s – was a technical and administrative nightmare. Teams of specialists planned and tracked the myriad of research, development and production activities. They produced mountains of paper to document the intricate work. As a result, people started to view project management as a highly technical discipline with confusing charts and graphs; they saw it as inordinately time-consuming, specialist-driven and definitely off-limits for the common man or woman!

Because of the ever-growing array of huge, complex and technically challenging projects in today's world, people who want to devote their careers to planning and managing them are still vital to the projects' success. Over the past 25–30 years, however, the number of projects in the regular workplace has skyrocketed. Projects of all types and sizes are now *the* way that organisations accomplish work involving development and change.

At the same time, a new breed of Project Manager has emerged. This new breed may not have set career goals to become Project Managers – many among them don't even consider themselves to be Project Managers. But they do know that they must successfully manage projects to move ahead in their careers. Clearly, project management has become a critical management skill for many, not just a career choice for a few.

Even though these Project Managers realise they need special tools, techniques and knowledge to handle their new types of assignments, they may not be able to devote large amounts of time to acquiring them, which is where this book comes in. This book is devoted to that vast majority of Project Managers.

About This Book

This book helps you recognise that the basic elements of successful project management are straightforward. The book provides information and explains powerful techniques that help you plan and manage projects successfully. Here, you discover too that a major challenge to a successful project is dealing with the multitude of people whom a project may affect or need for support. You find plenty of tips, hints and guidelines for both the *hard skills* such as for planning and the *soft skills* for working with people in and around your project.

But knowledge alone won't make you a successful Project Manager – you need to apply it. This book's theme is that project management skills and techniques aren't burdensome tasks you perform because some process requires it. Rather, they're a way of thinking, communicating and behaving to help you achieve successful delivery. They're an integral part of how people approach all aspects of their work every day.

Like all *For Dummies* books, this one is written to be direct and easy to understand. But don't be misled – the simple text still navigates all the critical tools and techniques you'll need to support your project planning, scheduling, budgeting, organising and controlling.

You'll find that we present the information in a logical and modular progression. Examples and illustrations are plentiful – so are the tips and hints. And there's some attempt at humour from time to time to keep the writing down-to-earth. The idea is that you finish this book feeling that good project management is a necessity and that you're determined to practise it!

Conventions Used in This Book

To help you navigate through this book, we use the following conventions:

- Italics point out new words and alert you to their definitions, which are always close by. On occasion, italics also add emphasis.
- Bold text indicates keywords in bulleted lists or highlights action parts in numbered lists.

Web addresses are a problem because they change and the information so quickly goes out of date. However, you'll find that the text gives enough information for you to search for a particular site or reference where you want to follow something up with a search on the Internet.

What You're Not to Read

Of course, we want you to read every single word, but we understand that your life is busy and you may have time to read only what's relevant to your experience. In that case, feel free to skip the sidebars. Although the sidebars offer interesting supplementary information and real-life stories, they're not vital to grasping the concepts.

Foolish Assumptions

When writing this book, we assumed that a widely diverse group of people will read it, including the following:

- Senior managers and junior managers (tomorrow's senior managers)
- Experienced Project Managers and people who've never been on a project team
- People who've had significant project management training and want to catch up on the latest ideas, and people who've had none
- People who've had years of real-world business and government experience, and people who've just started work

We assume that you have a desire to take control of your environment. After reading this book, we hope you wonder (and rightfully so) why all projects aren't well managed – because you'll think these techniques are so logical, straightforward and easy to use. But we also assume you recognise the big difference between *knowing* what to do and *doing* it. You'll have to work hard to overcome pressures that conspire to prevent you from using these tools and techniques. Pressures include any people senior to you who think that if you don't plan and control a project, it all works out fine just the same, only you'll have saved time and so deliver faster. Interestingly, the same people don't take that view when organising their family holidays.

Finally, you'll find that you can read this book repeatedly and find out something new each time. Think of this book as a comfortable resource that has more to share as you experience new situations.

Icons Used in This Book

The small icons in the left margins of the book are to alert you to special information in the text. Here's what they mean:



This icon gives a real or hypothetical situation to illustrate a particular point we make in the main text.



This icon is for things to help you get to grips with terms or issues that are a bit more technical, or at least that sound more technical.

ANEMBER

This icon points out important information you want to keep in mind as you apply the techniques and approaches.

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The Tip icon highlights something you can use to improve your project management practices.



This icon highlights potential pitfalls and dangers.

Beyond The Book

You may find every now and then that you need some additional information or just a quick recap on project management.

In addition to the material in the print or e-book you're reading right now, this book also comes with some access-anywhere goodies on the Internet. Regardless of how good your memory is, you can't possibly remember everything related to project management, so check out the free Cheat Sheet at

www.dummies.com/cheatsheet/projectmanagementuk , which will bring back the most important points about the subject.

You can also find more helpful tidbits of information and advice online at www.dummies.com/extras/projectmanagementuk .

Where to Go from Here

You can read this book in many ways, depending on your own project management knowledge and experience and your current needs. However, it's worth starting out by taking a minute to scan the table of contents and thumb through the sections of the book to get a feeling for the topics.

If you're new to project management and are just beginning to form a plan for a project, first read <u>Parts I</u>

and II, which explain how to plan outcomes, activities, schedules and resources. If you want to find out how to identify and organise your project's team and other key people, start with <u>Chapter 10</u> and <u>Part III</u>. If you're ready to begin work or you're already in the midst of your project, you may want to start with <u>Part IV</u> to look for advice on keeping things on track. Or feel free to jump back and forth, hitting the topics that interest you the most.

No matter how you make your way through this book, plan on reading all the chapters more than once – the more you read a chapter, the more sense its approaches and techniques will make. And who knows? A change in your job responsibilities may create a need for certain techniques you've never used before. Have fun!

<u>Part I</u>

Understanding Projects and What You Want to Achieve

getting started with Project Vanagement



For Dummies can help you get started with lots of subjects. Go to www.dummies.com to learn more and do more with For Dummies.

In this part ...

- Come to grips with how projects are structured, and learn how to think through the life cycle of your project.
- Get the inside track on why projects are likely to be needed within a business.
- Learn how to answer the question 'Is this really a project?', because not everything is.
- Understand who's likely to have an interest in your project, and how you have to deal with them.

<u>Chapter 1</u> Success in Project Management

In This Chapter

- Understanding what makes a project a project
- Seeing what's involved in project management
- Coming to grips with the Project Manager's role
- Knowing what it takes to be a successful Project Manager

Organisations are constantly changing, and ever faster, as they adapt to new market conditions, new financial conditions, new business practices, new legal requirements and new technology. Then there is work to be done such as to upgrade or move premises, install new facilities, carry out major maintenance, improve manufacturing processes and re-brand commercial products. A lot of that work is carried out with projects, and as a result businesses are increasingly driven to find individuals who can excel in this project-oriented environment.

Taking on a Project

Because you're reading this book, the chances are that you've been asked to manage a project for the first time or that you're already involved in projects and are looking to see whether you can find easier and better ways of doing things. If the project is indeed your first one, that's a challenge and may well give you the chance to excel in something you haven't done before; for many, managing a project even opens a door to a new career. The really good news here, whether you're completely new or have some experience, is that project management has been around for a very long time. In that time, Project Managers have come up with highly effective strategies and a range of very practical techniques. You can benefit from all that experience, and this book takes you through what you need to know.

So, hang on tight – you're going to need an effective set of skills and techniques to steer your projects to successful completion. This chapter gets you off to a great start by showing you what projects and project management really are and by helping you separate projects from non-project assignments. The chapter also offers some insight on why projects succeed or fail and starts to get you into the project management mindset.

Avoiding the Pitfalls

By following a sound approach to the project, you automatically avoid many of the pitfalls that continue to contribute to, or cause, project failure on a mindboggling scale. You may ask why, if good ways of doing things are out there, people ignore them and then have their projects fail. Good question. People make the same project mistakes repeatedly, and they're largely avoidable. You may have come across the joke by comedian Tommy Cooper:

I went to the doctor and said 'Every time I do this, it hurts.' The doctor said, 'Well, don't do it then.'



A national public project run in the UK to create a database of offenders for use by the Prison Service, Probation Service and others attracted heavy criticism for poor management. The National Audit Office, which checks up on government departments, investigated and reported that the project was delayed by three years, and the budget was double the original, but the scope had been radically cut back. Edward Leigh MP, chairman of the powerful Public Accounts Committee in Parliament at the time, described the scheme as a 'spectacular failure' and 'a master-class in sloppy project management'.

The following list takes a quick look at the main causes of project failure. The list makes for depressing reading but gives a good background against which to contrast successful project management and the approach in this book.

- Lack of clear objectives: Nobody's really sure what the project is about, much less are people agreed on it.
- Lack of risk management: Things go wrong that someone could easily have foreseen and then controlled to some degree or even prevented.
- No senior management 'buy in': Senior managers were never convinced and so never supported the project, leading to problems such as lack of resource. Neither did those managers exercise effective management supervision (good project governance) as they routinely do in their other areas of responsibility.
- Poor planning: Actually, that's being kind, because often the problem is that no planning was done at all.

It's not surprising, then, when things run out of control because nobody knows where the project should be at this point anyway.

- No clear progress milestones: The lack of milestones means nobody sees when things are off track, and problems go unnoticed for a long time.
- Understated scope: The scope and the Project Plan are superficial and understate both what the project needs to deliver and the resource needed to deliver it. The additional work that is necessary then takes the project out of control, causing delay to the original schedule and overspending against the original budget.
- Poor communications: Many projects fail because of communication breakdown, which can stem from unclear roles and responsibilities and from poor senior management attitudes, such as not wanting to hear bad news.
- Unrealistic resource levels: It just isn't possible to do a project of the required scope with such a small amount of resource – staff, money or both.
- Unrealistic timescales: The project just can't deliver by the required time, so it's doomed to failure.
- No change control: People add in things bit by bit scope creep. Then it slowly dawns on everyone that the project's now grown so big that it can't be delivered within the fixed budget or by the set deadline.

That's ten reasons for failure, but you can probably think of a few more. The interesting thing about these problems is that avoiding them is, for the most part, actually not that difficult.

Deciding whether It's a Project

Before you start to think too deeply about how to set up the project, the first thing to do is check whether it really is one.

You can think about three things to decide if a job is a project:

- Is it a one-off job or something that's ongoing? If the job is ongoing, like taking customer orders, then it's business as usual, not a project.
- Does the job justify project controls? Project management means incurring some overheads, but some jobs are so small or straightforward that they just don't justify that degree of control.
- This last one may sound a little weird, and it certainly doesn't fit with the formal definitions; it's the question, 'Do you want to handle the job as a project?' You may choose to deal with a block of work as a project, but I wouldn't – sometimes you have a choice.

Grasping the four control areas

Projects, large or small, involve the following areas of control:

- Scope: What the project will deliver
- Time: When the project will deliver
- Quality: So often forgotten, but an essential dimension
- Resource: Necessary amounts of staff time, funds and other resources such as equipment and

accommodation that the project needs

You need to balance these areas for each project, and you can see immediately why so many projects get into difficulties. You look at a project, think about the four control factors and say to yourself, 'They want that scope, to that quality level, with just that resource and by then? They've got to be joking!' Strangely, organisational managers often commit projects to failure by insisting on unachievable deadlines or unrealistic resources. What's even more strange is that those same managers are then surprised and even angry when the projects inevitably get into difficulties and fail.

Getting the balance right in the early part of the project when you do the main scoping and planning is, obviously enough, essential. Jerry Madden of NASA, the American space agency, produced a great document called 'One Hundred Rules for NASA Project Managers'. Rule 15 is:

The seeds of problems are laid down early. Initial planning is the most vital part of a project. The review of most failed projects or project problems indicate the disasters were well planned to happen from the start.

It's also useful to think about the four areas of control when dealing with change in the project. <u>Chapter 13</u> includes a 'four dog' model to help you think about the interaction. Although many other considerations may affect a project's performance, the four components are the basis of a project's definition for the following reasons:

The only reason a project is run is in order to produce the results specified in its scope.

- The project's end date is often an essential part of defining what constitutes success.
- The quality requirement is a vital part of the balance and may be the most important element. What's the point of delivering an unusable heap of garbage on time and within budget?
- The availability of resources can affect which products the project can produce and the timescale in which it can produce them.



Quality can be a very important factor, and is sometimes the most important, so do think about it carefully. A project to build and install a new air traffic control system for the south of the UK was criticised for being over budget and late on delivery. As a number of people have pointed out, though, if you're sitting in an aeroplane circling while waiting to land at London Heathrow Airport – one of the world's busiest – would you rather that they'd got the air traffic control system in on time and to budget or that they'd got it right?

Recognising project diversity

Projects come in a wide assortment of shapes and sizes. For example, projects can:

Be large or small:

- Building the new Crossrail link across London, at a cost of around £15 billion and taking seven years to complete.
- Preparing the annual report for the department may take you six days to complete, and may also be a project.

- Involve many people or just you:
- Training all 10,000 of your organisation's sales staff worldwide in the working of a new product is a project.
- Redecorating an office and updating the furniture and equipment is also a project.

Be defined by a legal contract or by an informal agreement:

- A signed contract between you and a customer that requires you to build a house defines a project.
- An informal agreement by the IT department to install new software in a business area defines a project.

Be business related or personal:

- Conducting your organisation's five-yearly strategy review is a project.
- Preparing for a family wedding is also a project and a much more pleasant one than the fiveyearly strategy review.

Understanding the four stages

Every project passes through four stages:

Starting the Project: This stage involves thinking through the project proposal at a high, 'sketch' level. That includes assessing the business need for the project and its overall characteristics. For example, it may be business-critical or very high risk. You must also give some thought as to who should be involved in the project if it goes ahead and check whether those people are available. You'll normally put all of this sketch-level information in a document called an Outline Charter (or just Outline for short), or your organisation may refer to it as a Project Brief. This stage will end with agreeing, or maybe not, to go on to the next stage and prepare a detailed Project Plan.

Organising and Preparing: This stage includes developing a full Project Plan that specifies what the project will deliver, the work to be done and the time, cost and other resources required. Then you'll need to work the Business Case up into full detail from the sketch version you prepared for the Outline. There will be other plans, too, such as for how you will control risks and how you will manage stakeholders. You'll normally produce two main planning documents in this stage. There's the Project Charter which covers the strategic parts of the project such as the Business Case, and the PMP (Project Management Plan) which covers the more tactical things such as the Project Plan, the Risk Plan and the Quality Plan. Then you'll need to produce a more detailed Stage Plan for the first Delivery Stage so the project can move on smoothly if the Charter and PMP are approved. If this all sounds like a lot, don't get too worried, for two reasons. First, you need to think things through properly if the project is to run smoothly. Second, in a smaller project especially, these plans may be quite short.

Carrying Out the Work: This stage involves doing the planned work. You'll normally split this up into a sequence of Delivery Stages, though in a very small project you might opt for having just one. During each Delivery Stage you'll be monitoring and controlling performance to ensure that things are going to plan, and doing the more detailed planning of successive phases as the project continues. Outputs from this stage may include project progress reports, financial reports and further detailed plans. Each stage will finish with a Stage Gate to check that everything is okay before going on to the next stage.

Closing the Project: This stage includes a clear shutdown of the project work and then assessing the result. You should also carry out an evaluation of how things went and measure the benefits achieved. However, as some benefits might not come on-stream for a while, you may also need one or more further reviews after the project to measure them. Outputs from this stage should also include suggestions for applying lessons learned (good and bad) from this project to future projects.

For small projects, this entire life cycle can take a few days. For larger projects, it can take years! <u>Chapter 2</u> goes though these stages – the life of your project – in more detail so you can see what you need to be doing and when.



In a perfect world, projects run smoothly and always go exactly to plan. However, because you don't live in a perfect world and because your project certainly won't be running in one, you need to be flexible. When starting to think about your project, you need to allow for:

The unknown and uncertain: Projects are rarely 100 percent predictable. The normal territory of projects is that, to some extent at least, you're going into the unknown. Therefore, your plans need to allow for things going off track. You need contingency; remember Murphy's Law – 'If it can go wrong, it will go wrong.'

- Learning by doing: Despite doing your best to develop good plans at the front end of the project, you may find later on that you can't achieve what you thought you could or in the way you thought you could. When this situation happens, you need to rethink in the light of the new information you've acquired.
- Unexpected change: Your initial assessments are sound, and your plan is detailed and realistic. However, some things can change with little warning. Perhaps the business environment changes, for example, and with it your organisation's whole market strategy. You need to rethink and re-plan in light of these new realities because ignoring them may seriously threaten the successful delivery of your project.

The Project Manager's Role

The Project Manager's job is to manage the project on a day-to-day basis to bring it to a successful conclusion. He'll usually be accountable to a senior manager who's the project sponsor, or to a small group of managers who form a Project Steering Group (PSG) or Project Board. The Project Manager's job is challenging but rewarding as he brings everything and everyone together to achieve a common goal.



It's important to understand that the Project Manager's position is indeed a role; it's not about status. That's true of all roles in the project and there may, for example, be very senior people working as team members (such as a chief engineer and legal advisers) who are accountable to the Project Manager. Have a look at <u>Chapter 11</u> to find out more about managing senior people who are on teams in your project.

The Project Manager doesn't do any of the technical work of the project in his role as Project Manager. If he's involved in technical work it's with a different hat on – that of a team member. The distinction is important because if you're doing teamwork as well as project managing, you must be clear about both roles and only wear one hat at a time. It's all too easy to neglect the management and let the project run out of control because you're so engrossed in the detail and challenges of your part of the technical work.

The Project Manager's role requires 'hard' skills such as planning and costing, but also 'soft' people skills. You can't specialise and cover only the hard skills, for example, with the excuse 'I'm not really a people person'. The next section covers the main tasks that a Project Manager handles and notes potential challenges that he may encounter.

Looking at the Project Manager's tasks

Your role as the Project Manager is one of day-to-day responsibility for the project, and that might make your project management role a full-time one. Or it may be that the project is smaller and less complicated and project management is just part of your work. Either way, the responsibilities are the same; it's just the scale and complexity that are different. Here's a summary of the main tasks:

- Sketch out initial ideas for the project, with the justification, outline costs and timescales.
- Plan the project, including mapping out the controls that will be put in place, defining what quality the project needs and how it will be achieved, analysing risk and planning control actions.
- Control the flow of work to teams (or perhaps just team members in a smaller project).
- Motivate and support teams and team members.
- Liaise with external suppliers.
- Liaise with Project Managers of interfacing projects.
- Liaise with programme management staff if the project is one of a group of projects being coordinated as a programme.
- Ensure that the project deliverables are developed to the right level of quality.
- Keep track of progress and adjust to correct any minor drifts off the plan.
- Keep track of spending.
- Go to others, such as the PSG, if things go more significantly off track (for example, if the whole project is threatened).
- Report progress to the PSG and perhaps to others too.
- Keep track of risks and make sure that control actions are taken.
- Deal with any problems, involving others as necessary.
- Decide on changes, getting approval from others where you don't have personal authority to make a decision (for example, when changes involve very high cost).
- Plan successive delivery stages in more detail.

Close the project down when everything's done.

So, the tasks will keep you very busy but being a Project Manager can also be very enjoyable if you have things in control.



A key to success is being proactive. Get out in front of the project and direct where it's going. Don't follow on behind the project being reactive and having to fire-fight countless problems because you didn't see them coming.

Avoiding shortcuts

The short-term pressures of your job, particularly if you're fitting in project management alongside other work, may tempt you to cut corners and leave things out. That's not the same as adjusting the project management needs to the project, but rather missing stuff out altogether that you really should have done. Resist the temptation to cut corners, because doing so usually comes back and bites you later when you face unnecessary problems, and delay, in the project.

Chapter 2

Thinking Through the Life of Your Project

In This Chapter

- Understanding the lifespan of the project
- Seeing the different characteristics of each stage
- Knowing what to do at each point in your project
- Dealing with project documentation and not letting it take over

This chapter covers the lifespan of the project from the initial idea through to closure. Sometimes seeing how things like business justification, planning and risk management fit into a project can be difficult until you have the big picture, so this chapter provides that big picture. It explains what you need to do and when, and also covers a couple of key project documents.

Being Methodical

Projects have a sequence from the first idea through to closure, and this chapter provides you with a simple, clear structure. If you want to move on to a more detailed approach, you can use a structured project method such as

PRINCE2® (PRojects IN a Controlled Environment): originally bought and developed by the UK government. $\ensuremath{\mathsf{PRINCE2}}\xspace$ is a registered trademark of AXELOS Limited.

PRIME (PRoject Implementation MEthod): A powerful but straightforward business-focused project method that Nick Graham, co-author of this book, helped produce.

Other methods include those associated with tools like Microsoft Project and those developed by major consultancies for use with their clients. In all cases, methods offer a structure that takes you through your project. PRINCE2 is rather more complicated than most because it has processes that don't run in a straight sequence. (Find out more in Nick's book *PRINCE2 For Dummies*, published by Wiley.) In contrast, this book sets out the work of project planning and management in a simple and linear way.

Breaking the Project into Stages

Just about all project management approaches break projects into stages, or you may know them as *phases*. <u>Chapter 1</u> set out the four main stages in any project:

- Starting the Project
- Organising and Preparing the project planning
- Carrying Out the Work
- Closing the Project

Of these stages, the third one – Carrying Out the Work – can repeat, so you can have more than one delivery stage. In a small project, you may decide on a single delivery stage, but in most projects you have several. You can see a project example with two delivery stages in Figure 2-1.

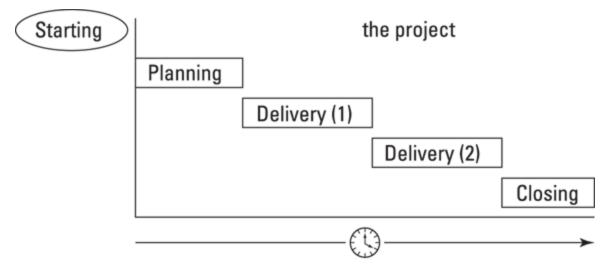
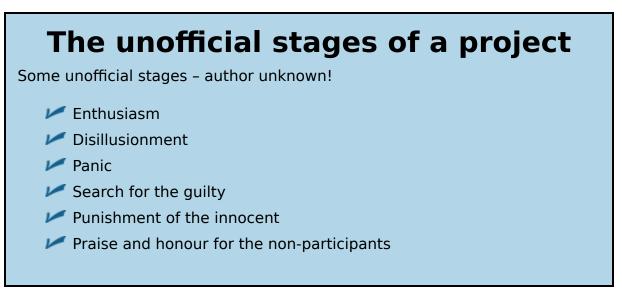


Figure 2-1: The stages of a project, with two delivery stages.



Some say that the first stage, Starting the Project, isn't part of the project but is rather preparation beforehand to include things such as checking to make sure that the project really is a project. That's a logical argument, and <u>Figure 2-1</u> reflects it.

If you go with the idea of Starting the Project not actually being part of the project, then the project starts for real with the full planning in the second stage.

Seeing the advantages of stages

Breaking the project into stages has many advantages. Take these four, for example:

- Stages allow everyone to concentrate on one part of the work at a time.
- They break up the detailed planning into convenient blocks, and you plan each delivery stage in detail just before that stage starts and using the latest information.
- It allows the sponsor or Project Steering Group (PSG) to stay in firm control of resource by authorising one stage at a time.
- It provides a clear point when each stage ends, usually called a stage gate, for checking that the project is still in control and remains viable.

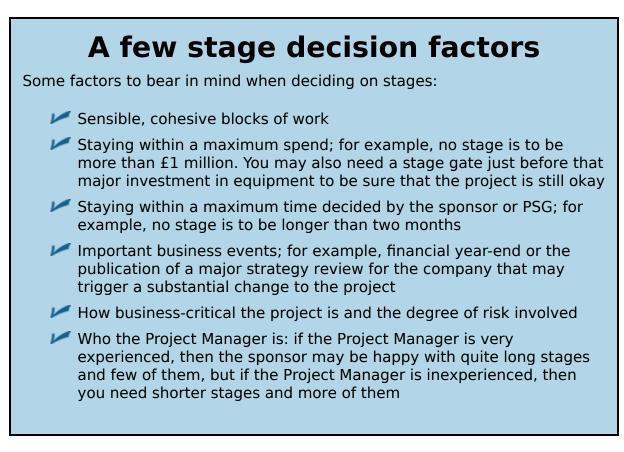
Deciding on the number of delivery stages

How many delivery stages should you have? Well, it all depends.

The first thing to say about delivery stages is that they're not all the same length. They're not timed units of, say, one month long. Rather, delivery stages reflect two main criteria:

- Blocks of work that are cohesive and where things belong together
- Amounts of work that the sponsor or PSG is willing to authorise at a time – the amount may vary at different points in the project according to, for example, the degree of risk in that part of the project

The end of each stage is marked by a stage gate meeting with the sponsor and other members of the PSG. The gate is a useful control point to take stock and check that the project is on track.



Understanding the Main Stages

The rest of this chapter focuses on each of the stages in turn, looking at what you need to do at each stage and the main project management documents you deal with.

Starting the project

Three reasons for having the Starting the Project stage are:

- You need to know whether the project idea is worth pursuing. Unfortunately not all ideas are good ideas. Rather than rushing into full planning, having a quick look at the idea makes sense before committing more time and resource to it.
- You need to get basic information together. You won't find it easy to plan the project if you haven't established, at least in outline, what the project is, what resource is available and any constraints such as on the delivery date.
- It's best to get everyone with an interest to agree to the idea before going on to full planning. If you leap straight into full planning to save time, you often discover that disagreement arises when people check the plans, because they have different ideas about the project even though they're using the same words.

Understanding the characteristics

The main thing to remember about Starting the Project is that you need to go fast. A common mistake is confusing Starting the Project with the next stage of Organising and Preparing, which takes a while. It's likely that Starting the Project will take a couple of days and it may just be a couple of hours, even for a fairly substantial project.

Imagine that you're a rich and successful Project Manager (or perhaps you don't have to imagine it) and you want a huge house built for you. You go to an architect and say, 'I'd like you to build a house for me please.' What does the architect reply? Is it, 'That's fine, I'll come back to you in eight weeks with some scaled drawings'? No, the architect says, 'Please take a seat and let's talk about what you have in mind, and we'll do a sketch.' The architect starts with a sketch, not a