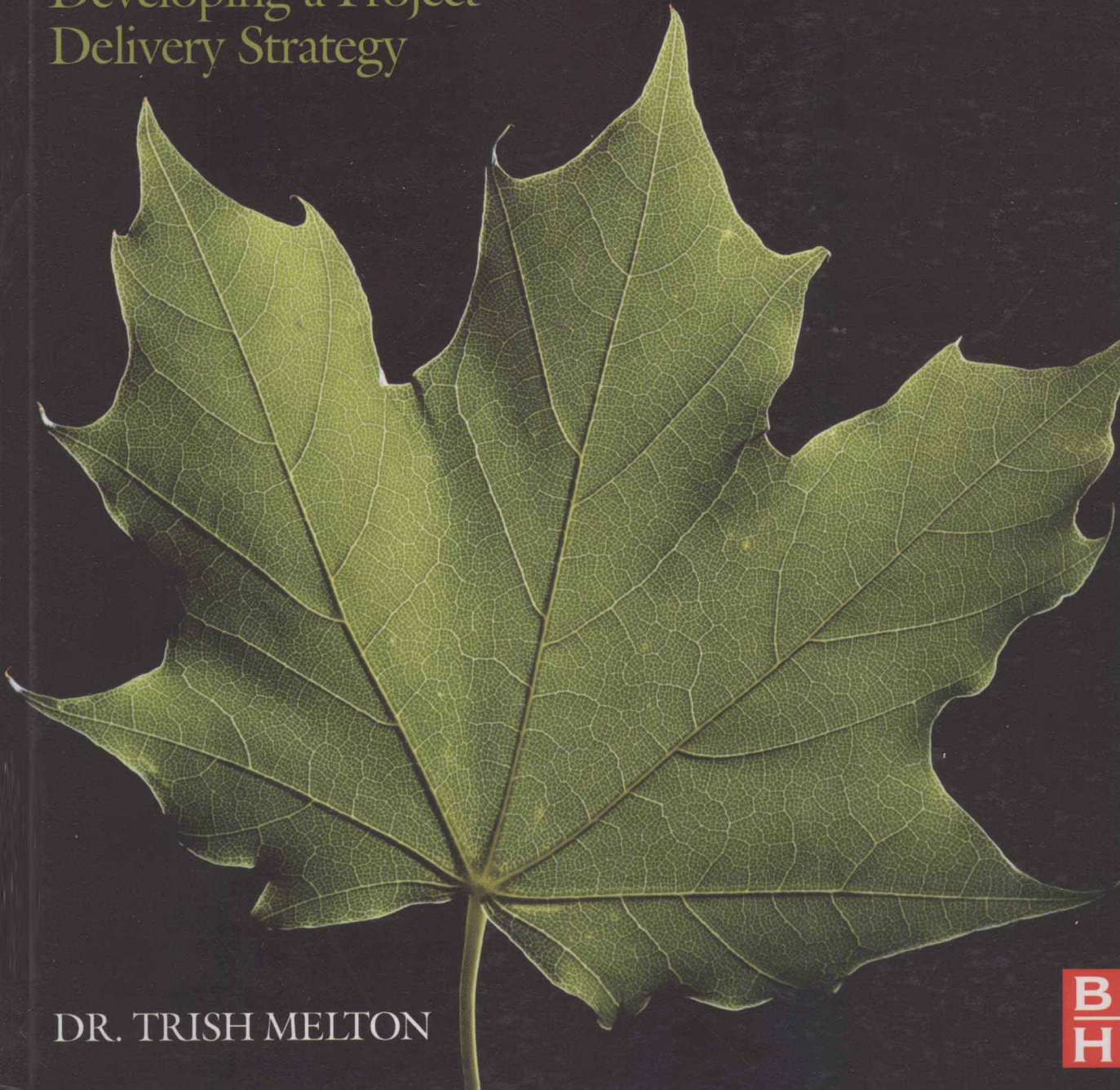


IChemE

# REAL PROJECT PLANNING

Developing a Project  
Delivery Strategy



DR. TRISH MELTON



# Real Project Planning

## Developing a Project Delivery Strategy

Dr Trish Melton



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# About the author

**Trish Melton** is a project and business change professional who has worked on engineering and non-engineering projects worldwide throughout her career. She works predominantly in the chemicals, pharmaceuticals and healthcare industries.

She is a chartered Chemical Engineer and a Fellow of the Institution of Chemical Engineers (IChemE), where she was the founder Chair of the IChemE Project Management Subject Group. She is a part of the Membership Committee which reviews all applications for corporate membership of the institution and in 2005 she was elected to the Council (Board of Trustees).

She is an active member of the International Society of Pharmaceutical Engineering (ISPE) where she serves on the working group in charge of updating ISPE's *Bulk Pharmaceutical Chemicals Baseline® Guide*. She is the founder and Chair of the Project Management Community of Practice formed in 2005. She has presented on various subjects at ISPE conferences including project management, quality risk management and lean manufacturing, and has also supported ISPE as the conference leader for project management and pharmaceutical engineering conferences. She is also the developer and lead trainer for ISPE's project management training course. In 2006 the UK Affiliate recognized Trish's achievements when she was awarded their Special Member Recognition Award.

Trish is the Managing Director of MIME Solutions Ltd., an engineering and management consultancy providing project management, business change management, regulatory, and GMP consulting for pharmaceutical, chemical and healthcare clients.

Within her business, Trish is focused on the effective solution of business challenges and these inevitably revolve around some form of project: whether a capital project, an organizational change programme or an interim business solution. Trish uses project management on a daily basis to support the identification of issues for clients and implementation of appropriate, sustainable solutions.

Good project management equals good business management and Trish continues to research and adapt best practice project management in a bid to develop, innovate and offer a more agile approach.

# About the Project Management Essentials series

The Project Management Essentials series comprises four titles written by experts in their field and developed as practical guidelines, suitable as both university textbooks and refreshers/additional learning for practicing project managers:

- Project Management Toolkit: The Basics for Project Success.
- Project Benefits Management: Linking Projects to the Business.
- Real Project Planning: Developing a Project Delivery Strategy.
- Managing Project Delivery: Maintaining Control and Achieving Success.

The books in the series are supported by an accompanying website <http://books.elsevier.com/companions>, which delivers blank tool templates for the reader to download for personal use.

# Foreword

This book has become a reality for a number of reasons:

- As an experienced Project Manager I realized that more and more I was dealing with customers, sponsors and Project Team members who had no project management experience. My first book in this series: *Project Management Toolkit* (Melton, 2007), was a direct response to that. However I have found that project delivery planning is a particular area where expertise is lacking.
- As the founder Chair of the IChemE Project Management Subject Group (PMSG) and then more recently a part of the Continuous Professional Development (CPD) and Publications Sub-groups it was also evident that there wasn't a full series of books which would support the further development of the Project Manager.

*Real Project Planning: Developing your Project Delivery Strategy* is intended to be a more in-depth look at the second value-added stage in a project and builds on from Chapter 4 of the *Project Management Toolkit* (Melton, 2007).

The other books in the project management series, (Melton, 2007) are outlined earlier (page vii).

Although this book is primarily written from the perspective of engineering projects within the process industries, experiences from both outside of this industry and within different types of projects have been used.

The tools, methodologies and examples are specific enough to support engineering managers developing project delivery plans for projects within the process industries yet generic enough to support the R&D manager in developing a plan to develop or launch a new product; the business manager in planning to transform a business area or the IT manager in planning to deliver a new computer system. The breadth of the short and full case studies demonstrate the generic use of the planning methodologies presented over a wide range of industries and project types.

Project management is about people and this book will emphasize the criticality of the development of plans to support the 'soft' side of projects: the people whose lives may change as a result of a project, the Project Team members who are key to effective delivery, the sponsors and organizational stakeholders who ensure, with the Project Manager, that 'no project is an island'.

# Acknowledgements

In writing a book which attempts to share a greater level of expertise than previously (*Project Management Toolkit*), you need to develop that expertise, gain peer review and then share and test it. I therefore want to acknowledge a number of people against these specifics:

For supporting the development of my project delivery planning expertise over many years:

➤ Ray Scherzer, GSK.

For supporting the peer review of this collated project delivery planning expertise:

➤ Arnold Black (Member of the IChemE Project Management Subject Group Committee).

➤ Bill Wilson, Paul Burke and Jeff Wardle, AstraZeneca.

For sharing and testing this collated project delivery planning expertise on real 'live' projects:

➤ All my current and past clients.

➤ Associates of MIME Solutions Ltd such as Victoria Bate, Andrew Roberts and others.

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Author's Note: Although all the case studies presented in this book are based on real experiences they have been suitably altered so as to maintain complete confidentiality.

# How to use this book

When you pick up this book I am hoping that before you delve into the content you'll start by glancing here.

The structure for the book is based around the concept that every project goes through three types of planning phases – these are described in Chapter 1 and then each phase becomes the subject of its own chapter (2 to 4).

Chapter 1 is a general introduction to the concept of building a robust Project Delivery Plan – a term which conveys so much more than simply 'planning'. This can be read at any time to refresh you on some basic concepts which are applied within the core chapters. This chapter also provides the link between the *Project Management Toolkit* (Melton, 2007) and this more in-depth look at the second value-added stage in a project.

Chapters 2 to 4 are the 'core chapters' made up of the following generic sections:

- Introduction of detailed planning concepts.
- Presentation of specific methodologies and how they support effective planning.
- Introduction of planning tools and associated tool templates.
- Demonstration of chapter concepts, methodologies and tool use through the use of case studies.
- Summary of handy hints.

Each core chapter can 'stand-alone', so the reader can dip into any planning phase.

Chapter 5 pulls together all the previous planning concepts into a suggested structure for a Project Delivery Plan document and also discusses more complex programme management planning issues.

Chapters 6 to 8 contain a series of case study projects, and in effect, are the culmination of the use of all planning concepts and methodologies introduced in the previous chapters. These aim to show the breadth of project delivery planning issues which may arise and how these have been dealt with. Within these case studies various formats for Project Delivery Plan documents are presented based on the needs of the specific project or programme.

The blank template for a sample Project Delivery Plan is contained on the IChemE website within a protected area. Readers will receive a password with each copy of the book allowing them to access to the template. The actual format of the template cannot be changed but the tool can be used electronically by the reader to fill in the project data as required by the template.



## And remember . . .

There will always be someone on your project who is in a great rush to 'start the project' (meaning delivery!) whilst you are pulling together the project delivery plan. The hardest job of the Project Manager is harnessing this energy in the right direction.

- Time spent **planning before delivery** is more than compensated by a controlled project delivery.
- Start your **delivery in haste and repent in leisure** with the mountain of issues which prolong the project life and reduce the chances of success.

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# 1

## Introduction

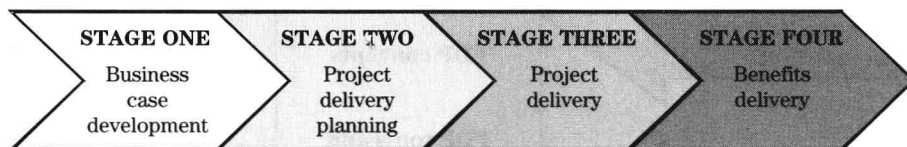
This book develops the project delivery planning concepts originally outlined in *Project Management Toolkit* (Melton, 2007).

Following approval of a project, the business, the sponsor and the allocated Project Manager are all eager to begin delivery. All too often there is nothing to stop this natural tendency and so project delivery commences with little or no planning. The result is that all stakeholders end up with a less efficient and effective project delivery and outcome for the business.

The role of a Project Manager at this early stage in a project is to 'put the brakes on', engage with appropriate stakeholders and perform some robust and value-added planning, a fundamental part of the project lifecycle.

### The project lifecycle

As outlined in *Project Management Toolkit* (Melton, 2007), a project goes through four distinct 'value-added' stages from its start point to its end point (Figure 1-1). Each stage has its own start and end point and each has a specific target to achieve. Effectively each stage can be considered a 'project' within a project.



**Figure 1-1** The four 'value-added' project stages

#### ***Stage One: Business case development***

The project start point is usually an idea within the business, for example an identified need, a change to the status quo or a business requirement for survival. At this stage the project management processes should be challenging whether this is the 'right' project to be progressing.

#### ***Stage Two: Project delivery planning***

This stage is all about planning and the project management processes are used to determine how to deliver the project 'right'.

### Stage Three: Project delivery

Effective delivery is all about the control and management of uncertainty. This stage is therefore focused on the controlled delivery – to deliver the project ‘right’.

### Stage Four: Benefits delivery

The final stage involves integrating the project into the business – allowing the project to become a part of the normal business process, business as usual (BAU).

This book is concerned with Stage Two: project delivery planning, where the start point is typically approval to develop a plan (in readiness for delivery) and the end point is an approved project delivery plan (PDP).

### Aims

The aim of this book is to introduce the importance of project delivery planning to an audience of Project Managers who have had both good and not so good experiences when planning and delivering their projects. It provides the reader with education, tools and the confidence to plan projects so that the chances of success are increased.

Figure 1-2 shows an input–process–output (IPO) diagram for this book.

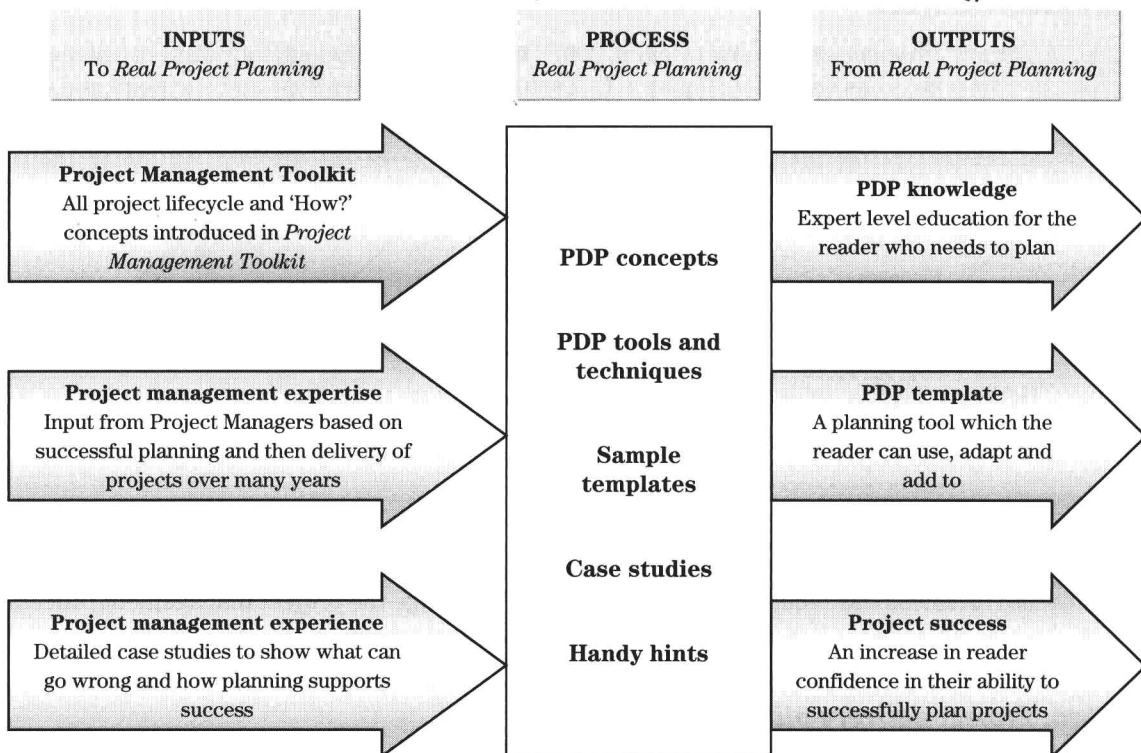


Figure 1-2 The input–process–output (IPO) for this book

Figure 1-2 represents the process by which the aims are to be achieved:

- *Inputs* – lists the inputs to the development of this book.
- *Process* – summarizes the contents of this book.
- *Outputs* – lists the outputs from this book from the perspective of the reader.

Although there are many ‘basic’ planning tools and techniques available, the aim of this book is to introduce methodologies and principles to support the planning of more complex projects and programmes. Initially though, it will reinforce the project delivery planning tools and concepts introduced in *Project Management Toolkit* (Melton, 2007):

- Asking ‘how?’ is the second value-added stage in a project and the start of the project delivery planning process.
- Planning a project involves more than generating a time-based activity plan (schedule).
- Planning is all about increasing the chances of success in an uncertain world.
- The process of project delivery planning links Stage One to Stage Three; it aims to plan how to achieve the approved business case.

The book will continue to develop generic tools and techniques which can be applied within any type of organization and any type of project. This will be demonstrated in Chapters 6–8 through the use of a variety of different case study projects.

## What is project delivery planning?

It is clear from many project experiences that there is a variable understanding of ‘planning’ and as highlighted in *Project Management Toolkit* (Melton, 2007), there is common misconception that project planning is merely the time-based plan of activities to be completed. ‘When?’ is only one of a number of questions that a project plan must answer if project delivery is to have the best chance of success. Other key questions are:

- **What?:** Is there a clear understanding of what the project is aiming to achieve?
- **What if?:** What are the potential scenarios which could impact project success?
- **Who?:** Does the organization have the resources (capacity and capability) to complete the project; if not, does it have access to appropriate external resources?
- **How?:** There are many ways in which a project goal can be achieved, so a PDP must articulate the actual delivery methodology.
- **How much?:** After ‘time’, the next area which organizations need to address relates to the amount of investment they should be making and the type of investment (capital or revenue funding, people, equipment, assets and so on).

However, the first question a PDP must answer is ‘Why?’ Although a business case will have been developed, it remains the responsibility of the Project Manager to develop and deliver a plan which meets the business requirements, and therefore ultimately deliver something which answers the ‘why?’ question. A Project Manager can learn a lot about how he should deliver a specific project by asking ‘why?’

### Short case study

An expanding business required an office refurbishment project because there was not sufficient space in their building to house their employees (current and future forecast). A business case had determined the feasibility of different options to address this business requirement:

- **Option 1:** New office building – determined as too costly for the company at that time.

- **Option 2:** New employee working arrangements – increased virtual and home working does not support the required level of customer and colleague contact needed.
- **Option 3:** Refurbish existing building – the office utilization (people/m<sup>2</sup>) is currently low compared with the national benchmark so this is determined to be the most appropriate solution.

A Project Manager was asked to deliver Option 3 for a specific cost and within a specified time. However, before planning commenced the Project Manager still needed to understand the 'optioneering' so that he could plan appropriately:

- Rejection of Option 1 indicates that low cost is a high priority for the company. The increased number of employees signifies an expansion of business but one which is tentative at this stage.
- Rejection of Option 2 indicates that the current company culture does not consider that new working practices are required (just allow more people to work in the same space doing the same things). This may signify a resistance by the company management to consider new working practices which are inevitable in a project such as this. It is an indication of how 'soft' issues can impact a project.
- Acceptance of Option 3 shows that the company recognizes that some aspects of its working practices are not externally competitive, however the example quoted simply reflects 'hard' issues.

Based on this the Project Manager was able to develop a delivery methodology which incorporated greater elements of business change planning. He did not just accept that he was refurbishing an office; he integrated best practice office 'ways of working' and designs into the project scope. As a result the business not only achieved, but exceeded, its goal by being able to increase output from the business through increased employee capacity **and** effectiveness.

### ***Integration of 'soft' and 'hard' elements***

What the above short case study demonstrates is that all aspects of a project need to be planned in order to increase the chances of success: both 'soft' and 'hard' elements. Often the former is ignored and the latter completed at a very tactical level only:

- **Soft:** Generally these refer to people, behaviours, relationships and intangible parts of the project or business case.
- **Hard:** Generally these refer to the more tangible elements in a project: scope, cost, time, project deliverables and financial benefits.

The effective integration of both elements is what makes a plan a good plan.

Project management is the management of uncertainty and the Project Manager's goal is to progressively increase the certainty of outcome – hopefully a successful outcome. Planning is a crucial phase in this process. There is extensive data available which highlights the value of good planning. It links in to general data on the front end loading (FEL) of the project process. FEL is based on the requirement for organizations to manage limited resources and conflicting priorities:

- Organizations need to be sure that they have selected the 'right' project based on robust early definition work.
- Organizations need to know that a project will be delivered successfully with some level of certainty.

Good planning is therefore a part of FEL and time spent in the planning stage will deliver benefits that will be seen in remaining project stages and overall project outcomes.



The target for Stage Two is to complete all aspects of the project delivery planning process which:

- Determines the most appropriate way to deliver the project scope to meet the business needs.
- Ensures that the expected outcome is delivered for the business.
- Ensures that the business plans to receive the project and to deliver the benefits.
- Looks at the breadth of options available and the choices to be made to increase the probability of success.
- Highlights the analyses which need to be performed so that the choices are applicable for the specific situation.

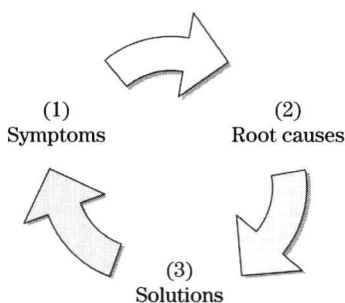
## Why a PDP is needed

To understand why a PDP is needed we have to understand why good project management practices are needed: to prevent chaos at any stage in a project's lifecycle.

Project chaos is often described as 'utter confusion' and the symptoms we typically see are:

- Projects delivered late or outside of their agreed budgets.
- Projects which don't deliver to agreed quality, quantity and functionality criterion.
- Projects which don't meet the intended business needs.

It is easy to react to the variety of symptoms but such a reaction can lead to further issues. In order to develop sustainable and robust project management practices the root cause of any symptom needs to be found and resolved (Figure 1-3).



**Figure 1-3** Symptoms and root causes

There are many techniques which can be used to identify root causes. The one used here is 'five whys':

- Ask 'why?' a maximum of five times.
- With each 'why?' the cause becomes more specific and therefore actionable.
- Usually the first and second 'why?' will generate further symptoms.
- Usually the third or fourth 'why?' will generate the cause of the specific project issue.
- Typically the fifth 'why?' will generate the root cause which requires resolution at the organizational level.

Within this chapter (pages 7 and 8) the 'five whys' technique has been used to identify project management practices within Stage Two of a project that need to be used to deliver project success: the delivery of sustainable business benefits.