

The Nature of Projects (or “How to recognise a project when you see one!”)

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Chapter 1

The Nature of Projects

1.1 Introduction to the Module: The Nature & Organisation of Project Management

The aim of this module is explore a number of themes which will deepen your general understanding of projects and of project management:

Theme 1 - Projects are different.

Projects have some predominant features which differentiate them from other ways of working. In order to succeed at project management the manager must use the appropriate approach.

Theme 2 - Projects are Effective and Strategic

Project Management is important because organisations deliver many of their most important strategic changes through once-off projects.

Theme 3 - Projects are delivered by People

The successful completion of any project is due to a number of factors most of which relate to human activity.

Theme 4 - Projects are organised differently

The unique nature of the project environment leads to some unique ways of integrating projects into existing organizations.

Theme 5 - The Project Manager is at the Centre

Projects demand a central leadership and co-ordination role. Successful projects require competent project managers with unique skill sets.

Theme 6 - The Project Manager is a Proactive Detective!

Project management is not a passive job. It is the responsibility of the project manager to proactively detect problems and manage towards a successful outcome.

1.2 Learning Objectives for this Chapter

Having completed this chapter you will:

- Be able to define a project
- Understand the attributes of projects which distinguish them from operational work
- Identify types of projects in various industries along with their particular characteristics
- Understand the distinction between Projects, Programmes and Portfolios
- Identify some reasons for the increasing use of Project Management in organisations and the consequent rise in the project management profession

1.3 Introduction

In this chapter we start our examination of projects and of project management in general.

We explore the nature of projects, their unique attributes and what it is about them that has resulted in the project approach being adopted as :

- an effective way of doing business
- a standalone professional discipline in its own right

1.4 Definition of a project

There are various definitions of a project available in project management literature. For example , Lock characterises projects as:

..The projection of ideas & activities into new endeavours

We will use one published by the Project Management Institute (PMI) in its Project Management Standard – The Project Management Body of Knowledge (PMBOK):

*A **project** is a temporary endeavour undertaken to create a unique product, service or result.*

The key words to focus on are **temporary** and **unique**.

Temporary means that projects are designed to start and to **end**. There are planned and fixed time boundaries. In general the start of a project is marked by a clear definition of the job that must be completed and by the approval to proceed. The end is determined by delivery of the expected results.

The project organisation is also temporary. Projects are generally delivered by teams, composed of people brought together from different areas of an organisation for the sole purpose of achieving the objective of delivering “a unique product, service or result”.

The word *unique* implies that something new is happening. In some endeavours this “newness” is quite obvious e.g. getting a man to the moon for the first time, developing and launching a brand new Games Console etc. An element of repetition is apparent in others e.g. organizing the Annual Staff Barbeque, developing minor upgrade to a launched Games console. However no two projects are ever exactly the same. They may differ in many ways - the people involved, the exact specification of the product to be delivered, the commercial or legal environment at the time etc. etc.

This aspect of novelty always means that we cannot predict the outcome of a project with a high level of certainty. In other words *risk* is always present in Projects. (...more of this in later lessons)

In contrast normal *operational work* is characterised by:

- Predictability
- Repetition and
- Routine

NOTE: The Project Management Institute identifies another distinctive attribute of projects - *progressive elaboration*. Because of the novelty aspect of *projects*, at the project start, the scope and objectives can usually be described only in simple high-level, overview terms. As the project moves through its cycle towards completion the level of definition and clarity increases. Thus the work and deliverables are progressively elaborated (or developed) as the project proceeds.

An example to illustrate progressive elaboration–

A company has recently become subject to legislation which was passed to regulate company financial operations. The CEO determines that a project is required to ensure that the company complies with the legislation.

The starting scope and objectives as stated by the CEO are simple and easily understood – “to be compliant with the legislation by end of the financial year”. However as this is brand new legislation there is little precedent available to indicate the types of systems & processes required and the changes that need to be made. No similar project has ever been completed by this company.

The project manager must however start with what is known and available – in this case they could use the CEO’s requirements, the text of the Act, their own knowledge of the company etc. She builds on this base to develop a statement of project scope and to include more detail. With the team she may generate a list of system requirements to clarify the work required by the IT department. Following broader consultations and legal advice she may even remove some deliverables from the scope. As the planning of the project proceeds she creates process designs and revised organisational structures which show in more detail what the impact on the company is likely to be. This process continues as the team continue to refine the project details.

Note: Progressive elaboration must be achieved in a managed and planned manner. It must be based on an assumption that the starting definition (however imprecise at that stage) are accurate and represent the totality of what is required from the project. Progressive elaboration should clarify, refine and expand on these known high level objectives – not add to them. Referring to the example given above - If the project manager was to decide to include “compliance to other health & safety legislation” as a project deliverable then this would represent an increase in scope of the project rather than an elaboration of the baseline scope.

1.5 Projects as Complex Systems

Complexity: composed of many interconnected parts or complicated, intricate or hard to understand.

Projects are also characterised by the presence of complexity and the challenge of project management is to achieve a successful outcome while dealing with this complexity. This requires approaches, activities and techniques which are more focused on :

- making sense in ambiguous situations
- generating meaning
- and learning from experience

In contrast the traditional view of project management was that the important activities for the project manager were :

- Generating requirements
- planning work and
- controlling work.



Exercise 1

Based on the project definition above, do you believe the following are good examples of projects? Give your reasons.

- A. Your payroll department generating pay cheques every month
- B. Construction of the Dublin Port Tunnel
- C. Brushing your teeth every morning
- D. The Minister for Finance preparing and delivering his annual Budget Speech to the Government
- E. Writing a novel

1.6 Types of Projects

The recommended text by Lock specifies 4 types of Projects. These are shown in the table below. Each of the initiatives in these groups will fit the criteria to be classified as a project. However the nature of the projects is likely to vary. Management of these projects must take into account their unique project environments.

The table compares some attributes of typical projects within each category.

Project Type	Examples	Capital Costs	Attributes	Risk
Engineering & construction	Port Tunnel New Oil Rig	High to Very High	Frequently Remote / Inhospitable/ Multiple subcontractors	High
Manufacturing	Development of the iPhone	High	Local/Remote Market Driven	Medium/High
Management	Open a new Call Centre Replace a Key IT System	Low to High	Usually local /controllable Frequently smaller in scale but with significant impacts	Low - High
Research	New Drug	High to very High	Local Hard to define boundaries	Very High

1.7 Projects, Programmes & Portfolios

Most organisations will run a number of projects simultaneously. Any individual project will seldom run in isolation to the other projects within an organisation. There may be links to these other projects because of sharing personnel, shared functional owners etc. The link may be even stronger than that - they may be sharing the same objectives or contribute to the same end result. Indeed, the successful start-up of one project may depend on successful completion of another. In order to manage such relationships, projects may be grouped as either Programmes or Portfolios.

Let us go to the Project Management Book of Knowledge (PMBOK) once again for some definitions which should help to clarify the distinctions between programmes and portfolios:

*A **Programme** is a group of related projects managed in a co-ordinated way to achieve benefits and control not available by managing them individually.*

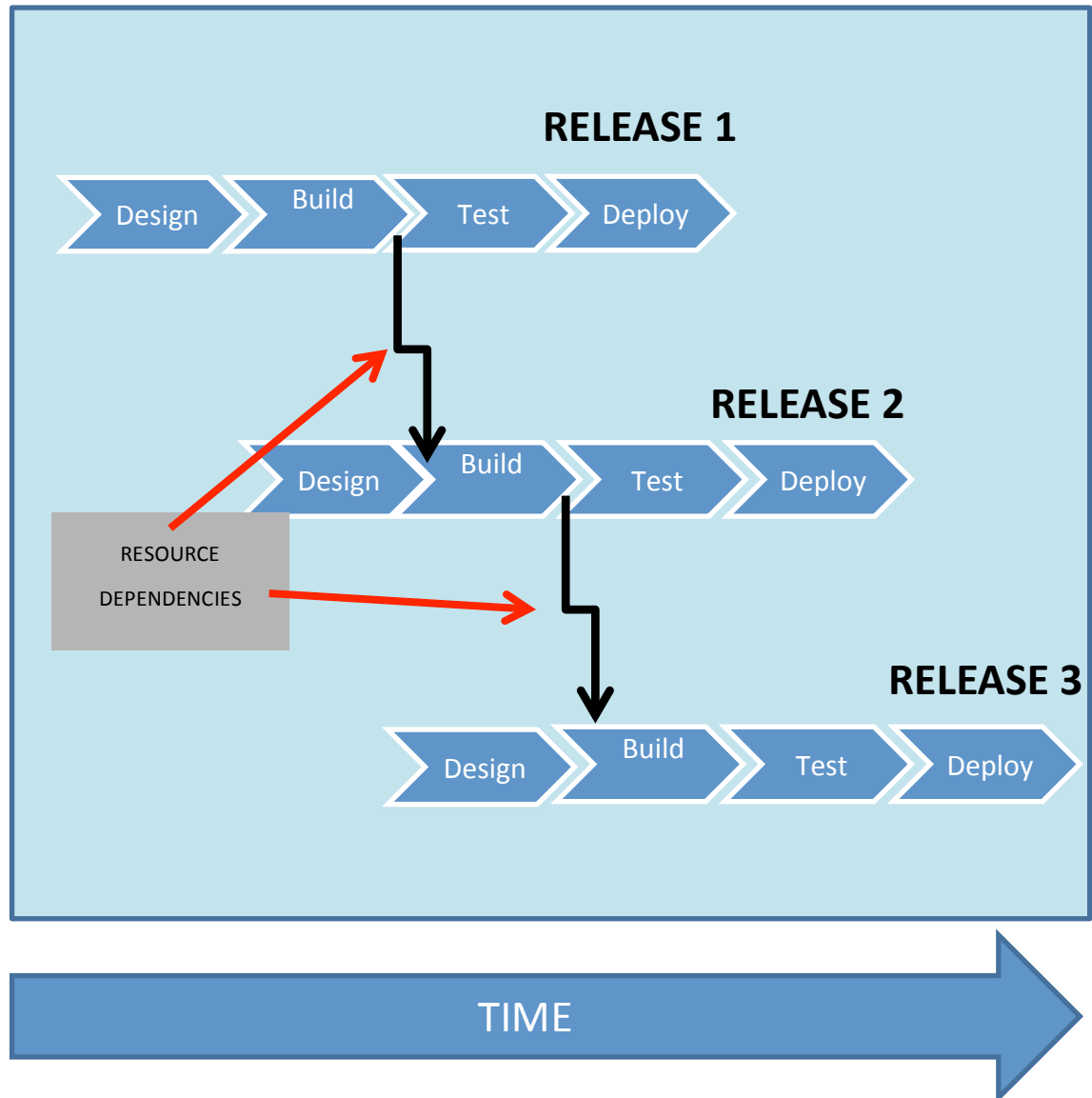
The key words are “related” and “co-ordinated” – each of the projects in a programme should contribute something to a common objective.

Example:

A software firm intends to release a new version of their software every 6 months to the market. The work to design, build and produce an individual release would constitute a project in itself and each project could be managed independently. However some constraints may exist between these releases – For example :

- Software version 2 cannot be released before software version 1
- design work for any version is allowed to start before delivery of the previous version – however all projects share the same software build team!

... The following figure illustrates the dependencies:



It is obvious that any delay in one project could have knock on impact on multiple subsequent projects. Managed individually the inter project dependencies may not be appreciated and communicated. It is the function of programme management to identify and resolve these issues.

In contrast to a Programme..

*..a **Portfolio** is a collection of projects or programmes and other work that are grouped together to facilitate effective management of that work to meet strategic business benefits.*

A Portfolio brings together a grouping of projects that are more loosely coupled than projects within a programme and which do not necessarily have strong links. A portfolio manager would typically be concerned with the mix of projects & programmes rather than their interdependencies. The Portfolio Manager is concerned with questions such as - “What are the types of projects that we are

running?” and “Is this the best set of projects to deliver on our overall strategic objectives?”

1.8 Project Management – What is it ? and Why is it Important ?

First – another definition from the PMBOK:

Project Management is the application of knowledge, skills, tools & techniques to project activities to meet project requirements.

So - project management is about applying a certain mix of skills & approaches which are effective in the project context.

An alternative definition is quoted in Burke and conveys perhaps a better sense of the work of the project manager:

Project Management is the process of integrating everything that needs to be donein order to meet the projects objectives.

We will see in other modules what this integration actually means and we will also explore the knowledge and techniques aspects mentioned by Lock. First let us look at some of the reasons why we should use this approach at all....

We have explored what is distinctive about the project context and seen that much of the work commonly done nowadays in commercial organisations (and elsewhere!) could be classified as project work. It could be argued that the same work could be performed without the imposition of “project management” structures. However certain factors are driving organisations to adopt the project management approach. Here are some significant ones:

- 1) Initiatives are getting bigger, more complex and can span multiple organisations, continents and cultures. This requires the coordination and cooperation of multi- functional team members.
- 2) Traditional functional organisations tend to fragment responsibility and to enforce localised views of problems at a time when centralised responsibility and co-ordination is becoming more important for clients.
- 3) The achievement of significant strategic objectives is not always possible using the normal resources and structure of an organisation. Temporary organisations (structured as projects) can fulfil this need.

The adoption of project management is not without pain! The separation of projects from the normal functional structure inevitably leads to some conflict. This may be due to prioritisation of work, allocation of resources etc. In addition the project management organisation must be integrated into the existing structure in some manner.

Despite this pain, project management continues to grow as a means of achieving goals and as a professional career path.

- In a recent survey by the PMI (Project Management Institute) of 250 senior executives:
 - 93% strongly agreed that project management is a valuable asset and
 - 90% agreed that project management was an effective way of ensuring success.
- The PMI which is US based claims over 300,00 members worldwide and the similar Europe based organisation, the IPMA, has over 80,00 certified members



Exercise 1-1 Optional Module assignment

Create a project "scrapbook" to record details of projects you have worked on (or are familiar with.) Start by giving brief overview of each project – its purpose, deliverables etc. After each lesson try to apply what you have learned to each of the projects by adding comment etc.

It would be more beneficial to use a few different types of projects –for example: –

- A well known project in the public arena
- A personal one which you have been involved with (building project etc)
- A past or present business project



References & Resources

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Student Notes

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