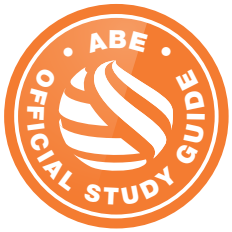
Your road to success

LEVEL 6 ADVANCED PROJECT MANAGEMENT



abeuk.com

ISBN: 978-1-911550-29-7

First published in 2017 by ABE
5th Floor, CI Tower, St. Georges Square, New Malden, Surrey, KT3 4TE, UK
www.abeuk.com

All facts are correct at time of publication.

Author: Gisa Ellis, MBA, MSc, Coach
Reviewer: Colin Linton, MRes MBA PGCHE DipM DipFS FCIB FCIM FCIPS FCIEA FHEA FInstLM

Editorial and project management by Haremi Ltd.
Typesetting by York Publishing Solutions Pvt. Ltd., INDIA

Acknowledgements: p12 Damir Sencar/Shutterstock.com; p23 Minerva Studio/Shutterstock.com; p26 MirasWonderland/Shutterstock.com; p30 Gisa Ellis/GoGilvah.com; p36 Andrey Burkov/Shutterstock.com; p59 ESB Professional/Shutterstock.com; p61 Rawpixel.com/Shutterstock.com; p75 Khvost/Shutterstock.com; p81 Lesia_G/Shutterstock.com; p93 Rawpixel.com/Shutterstock.com; p100 pisaphotography/Shutterstock.com; p108 xiaorui/Shutterstock.com; p110 motive56/Shutterstock.com; p126 Iryna Melnyk/Shutterstock.com; p128 Roman Voloshyn/Shutterstock.com; p131 Andres Navia Paz/Shutterstock.com; p134 NAN728/Shutterstock.com

Contents

Using your study guide iv

Chapter 1 Organisational and Strategic Management Issues 2

1.1 Evaluate the difference between project and programme management and the alternative contracting options available 3

1.2 Assess how the structure or an organisation can impact on the performance of project management 13

1.3 Analyse the external business and competitive environment within which a project is undertaken 21

1.4 Assess the strategic fit between major projects and corporate business strategy 27

Chapter 2 Human Aspects of Project Management 38

2.1 Compare and contrast leadership theories and their application to project management 39

2.2 Critically discuss aspects of teamwork relating to the successful management of projects 61

2.3 Evaluate the various methods of communication that could be used by an effective project manager 77

2.4 Critically evaluate principles of knowledge management and organisational learning in projects 85

Chapter 3 Project Planning and Benefits Realisation 90

3.1 Develop an appropriate business case for a project 91

3.2 Discuss considerations in the management of resources and budgets 100

3.3 Evaluate approaches for the identification and management of project/programme risks 107

3.4 Discuss approaches to monitoring project/programme delivery against milestones 113

3.5 Critically discuss the meaning and importance of benefits realisation 117

Chapter 4 The Role of Partnerships in Project Management 122

4.1 Review the role of partnerships in project management 123

4.2 Critically discuss the characteristics of an effective project partnership 127

4.3 Analyse how to monitor and manage project partnerships through to conclusion 130

Glossary 136

Using your study guide

Welcome to the study guide for **Level 6 Advanced Project Management**, designed to support those completing their ABE Level 6 Diploma.

Below is an overview of the elements of learning and related key capabilities (taken from the published syllabus).

Element of learning	Key capabilities
Element 1: Strategy and project management	• Awareness of the difference between project management and programme management and how a project or programme is influenced by the wider business strategy and structure *Strategic management, external analysis, performance management, contracting, business structures*
Element 2: Human aspects of project management	• Ability to apply theories of leadership to project/programme management • Critical understanding of the human aspects of project management, such as teamwork and communication, and their critical importance to the success of a project *Leadership, teamwork, project management, communications, knowledge management, organisational learning*
Element 3: Project planning and benefits realisation	• Knowledge of the strategic responsibilities of the project/programme manager • Ability to develop and business case appropriate to a project • Ability to plan and monitor a project/programme, including managing resources and budgets, assessing and managing risks, and monitoring progress *Strategy, responsibility and accountability, developing a business case, budget management, risk management, performance management*
Element 4: Partnerships	• Critical understanding of the role of partnerships in project management and the ability to assess when it may be appropriate to use partners *Critical thinking, partnerships, relationships management, monitoring, handling conflict, handling partnership termination*

This study guide follows the order of the syllabus, which is the basis for your studies. Each chapter starts by listing the syllabus learning outcomes covered and the assessment criteria.

L6 descriptor

Knowledge descriptor (the holder…)	Skills descriptor (the holder can…)
• Has advanced practical, conceptual or technological knowledge and understanding of a subject or field of work to create ways forward in contexts where there are many interacting factors • Understands different perspectives, approaches or schools of thought and the theories that underpin them. • Can critically analyse, interpret and evaluate complex information, concepts and ideas.	• Determine, refine, adapt and use appropriate methods and advanced cognitive and practical skills to address problems that have limited definition and involve many interacting factors. • Use and, where appropriate, design relevant research and development to inform actions. • Evaluate actions, methods and results and their implications

The study guide includes a number of features to enhance your studies:

'Over to you': activities for you to complete, using the space provided.

Case studies: realistic business scenarios to reinforce and test your understanding of what you have read.

'Revision on the go': use your phone camera to capture these key pieces of learning, then save them on your phone to use as revision notes.

'Need to know': key pieces of information that are highlighted in the text.

Examples: illustrating points made in the text to show how it works in practice.

Tables, graphs and charts: to bring data to life.

Reading list: identifying resources for further study, including Emerald articles (which will be available in your online student resources).

Source/quotation information to cast further light on the subject from industry sources.

Highlighted words throughout denoting **glossary terms** located at the end of the study guide.

Note

Website addresses current as of September 2017.

Chapter 1

Organisational and Strategic Management Issues

Introduction

Every corporation and business will establish a **business strategy** that is designed to support their **mission**, vision and **values**, whether it is a big blue-chip company like Apple or the hardware shop around the corner. A business strategy is essential to ensure that the business will grow in the right direction and deliver financial results to secure the business, satisfy its **stakeholders** and serve the owners in the future. Programmes and projects are part of the practical implementation of the strategy. This chapter will evaluate the impact of business strategy on these programmes and projects. It also examines how the organisational business structure and the internal and external environment affect projects and programme management, performance and success.

> *"First, have a definite, clear, practical ideal; a goal, an objective. Second, have the necessary means to achieve your ends; wisdom, money, materials, and methods. Third, adjust all your means to that end."*
>
> *Aristotle*

> *"Only 64% of projects meet their goals."*
>
> *Project Management Institute: Pulse of the Profession (2015)*

Learning outcome

On completing this chapter, you will be able to:

1 **Critically analyse the organisational and strategic management issues concerned with project management.**

Assessment criteria

1 Critically analyse the organisational and strategic management issues concerned with project management.

1.1 Evaluate the difference between project and programme management and the alternative contracting options available

1.2 Assess how the structure of an organisation can impact on the performance of project management

1.3 Analyse the external business and competitive environment within which a project is undertaken

1.4 Assess the strategic fit between major projects and corporate business strategy

Level 6 Advanced Project Management

1.1 Evaluate the difference between project and programme management and the alternative contracting options available

The difference between project and programme management

Business strategy defines the long-term vision and direction in which owners, shareholders and management envisage a business developing. For implementation and monitoring purposes, the strategy is broken down into long-term and short-term quantifiable goals and **milestones**. To reach these goals, programmes and projects are devised and put into action.

! NEED TO KNOW

A programme is a portfolio of projects. These are related, possibly interdependent and meet an overall objective. The co-ordinated management of a portfolio of projects is called programme management.

Some of the fundamental differences between programmes and projects are:

- Programmes usually require strategic planning and have a greater duration than a project. They are often ongoing whereas projects run over a shorter, specified period and centre around a deadline.
- Projects usually run on spending to a straightforward **budget**, whereas programmes are often tied to the revenue, cost and result of a business (for example, quarterly results).
- Programmes are usually governed by a senior level board that provides direction, oversight and control.

Area	Project management	Programme management
Focus	Single objective	Business strategy
Scope	Narrow	Wide-ranging, cross-functional

Area	Project management	Programme management
Benefits	Determined in advance	Used to make further decisions
Deliverables	Few, clearly defined	Many, some initially undefined
Timescale	Clearly defined	Loosely defined
Change	To be avoided	Regarded as inevitable
Success factors	Time, budget, specification	Finance results, **return on investment (ROI)**, strategic
Plan	Specific, detailed, bounded	High-level and evolving

Table 1: Project vs. programme management

Therefore, there are also differences between programme and project management:

- You could compare programme managers with architects, who are involved with the overall vision and structure and organise the projects within the programme to achieve success. They are more strategic and look at the bigger picture.
- **Project managers** are more like engineers who plan in detail to provide ways to enable the vision. They are more tactical, seeking to complete tasks and deliverables on time and within budget.

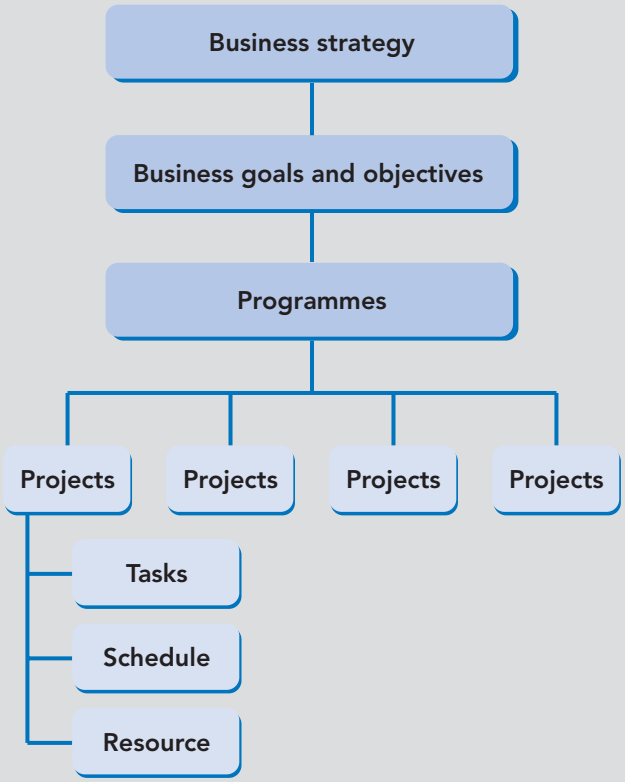


Figure 1: Example of a business strategy plan

OVER TO YOU

Activity 1: Programmes and projects

Choose a blue-chip company that interests you and identify one of their main programmes from the recent past. Consider what kind of projects it would be necessary to set up under this programme, and list 10. (Example: Apple creating the Apple Watch.)

Project staffing and resourcing

> *Hiring the right people takes time, the right questions, and a healthy dose of curiosity.*
>
> *Richard Branson (2013)*

Putting a **project team** together is vital for making a project successful. Without the right people and **resources** in place, a project will not go very far.

NEED TO KNOW

Project resource and staffing planning involves:

- identifying a project team that possesses the necessary skills to perform the tasks required;
- identifying the tools, equipment and facilities and other resources needed by the project team.

In scheduling resources, the project manager must ensure that both the project team members and the equipment are available when needed. The resource and **staffing plan** provides a blueprint for project resource availability.

Staffing and **resourcing planning** will be carried out in the following steps:

- Based on a task list and the schedule for the project, the project (team) leader carries out a **staffing and resourcing evaluation**. The project leader identifies: how many people are needed to complete the different tasks; what kind of skills they must possess; how long they will be needed for; when they will be working on the project; who must work with each other; and the critical path. The project leader also establishes the need for other resources and how they will be managed throughout the project.
- The project leader then puts together a **staffing and resourcing plan**, which describes what kind of resources will be allocated to the project and when those resources will be required. The staffing and resourcing plan also establishes which members of the team will be sourced in-house or which need to be hired from outside the organisation as **contractors**, **consultants** or **freelancers**.

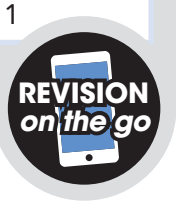
The plan will also include how the team members will work together, how they will be placed in the project and brought up to speed, how they communicate, who they report to and how everyone is organised in general within the project.

Define the specific roles and skills needed to execute the tasks. Based on the tasks in the work breakdown structure, refine initial descriptions of roles and responsibilities identified in the high-level staffing plan of the initial stage.
Determine the timetable for the staff needed. This is the period of time that the team member or skillset is needed for, and how many hours a person, department or entire project team will be needed each week or month.
Determine if staff are available. Work with your organisation's management to determine if staff with the needed skillsets are available within the needed timeframe. Determine if it is necessary to acquire staff from external, contracted sources.
Secure the staff needed. If sufficient staff are not available, alert the **project sponsors** so they can help acquire the needed staff based on the priority of the project. If staff are allocated to other activities, negotiate with their management to make them available to the project for the time needed. In some cases, the organisation must determine the priority of each project relative to other projects contending for the same resources.
Identify any training or coaching needs and plans. If the staff assigned to the project lack the required expertise, plan for training or coaching to fulfil these needs.
Iteratively refine the staffing plan. As the project schedule is developed, adjustments may be required to the staffing plan.

Table 2: How to develop a project staffing plan

Activity	Role	Project responsibility	Number of staff required
Able requirement study	System analyst	Requirement study	1
User interface design	Designer	Design user interface	1
Develop system	Programmer	System development	2
Develop system	Programmer	Database development	1
System tester	System analyst	Test system	1
Trainer	Technical manager	Training	1
Installation	Technical manager	Data centre installation	1

Table 3: Example of a general staffing plan



	Resource name	Work (hours and minutes)	Details	06/01	06/08	06/15	06/22
1	Alison Smith	77h 20m	Work	5h 20m	22h	30h	20h
2	John Brown	44h 40m	Work	34h 40m	10h		
3	Peter Thompson	9h 20m	Work	1h 20m	6h	2h	
4	Wendy Meredith	4h	Work	2h	2h		
5	Lee Scott	2h	Work		30m	1h 30m	
6	Jesse Clegg	24h	Work		8h	8h	8h
7	Will Strong	15h 20m	Work		3h 20m	6h	6h
8	Oliver Blue	42h	Work		2h	36h	4h
9	Michelle Dickson	16h	Work			4h	12h
10	Mark Dobson	44h	Work		10h	8h	26h
11	James Upton	12h 30m	Work			6h 30m	6h
12	Ruth Daniel	4h 30m	Work			2h	2h 30m

Table 4: Example of an individual staffing plan, including hours

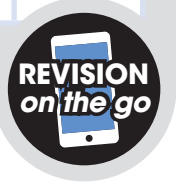


Figure 2: Factors necessary for developing a staffing plan

Staffing: in-house versus external contracting

> *You are only as good as the people you hire.*

Raymond Albert Kroc

> *I have read all your CVs and on paper you all look good, but so does fish and chips.*

Alan Sugar (2010)

There is no "one-size-fits-all" solution when it comes to staffing a project team.

Various factors must be taken into consideration in deciding if project team members are sourced in-house or externally, or by a combination of both. The main factors are cost, availability, skills and the unique set-up of the business.

The decision-making process should also take the following into account:

- Many businesses do not have adequate staffing levels to dedicate one or more employees to focus solely on one project.
- The internal staff may not have the specific project management experience, skillset or training to carry through a project.
- It might be too costly to hire and possibly train an employee for a project, especially when this person will not be needed when the project finishes. Often it is a better option to work with consultants or freelancers.
- Project management is a highly specialised area of knowledge that requires significant focus, attention to detail, the ability to see the bigger picture and the ability to work towards deadlines, sometimes under a fair amount of stress. Excellent project managers are hard to find, but they ensure the successful execution of a project.

- External contractors often have a higher level of objectivity as they are not involved with the business on a day-to-day basis.
- When buy-in from internal stakeholders is required, external project managers can run into challenges with internal staff. There may be additional work required to gain the trust and buy-in from internal stakeholders before a project even starts.
- Outsourced project managers are not internal stakeholders; therefore, it must be ensured that they are fully committed to the project's success and that there are structures and agreements in place to make external contractors reliable and accountable.
- External staffing can expose sensitive company information. It is critical that the business clearly and completely defines policies and processes, and communicates and implements measures to address these security issues.

OVER TO YOU

Activity 2: Project planning

Describe a project in your line of business or area of interest that you would like to plan and implement. Identify a list of the main tasks. What kind of resources and staffing would this project require?

Contracting strategies

"It's a very sobering feeling to be up in space and realize that one's safety factor was determined by the lowest bidder on a government contract."

Alan Shepard

"A contract is an ask game, and if it asks for an hour, and I submit to an hour, then it's an hour. When I look at a contract, I look at the obligation – where, when, how long, the compensation. If I agree to it, that's the way it is. I have an obligation. They have an obligation."

Chuck Berry

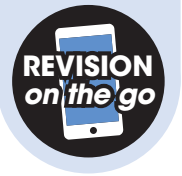
The relationship between business owners and contractors has a major impact on a project's performance. The right contracting strategy at the beginning of the project development phase will help to establish this relationship, reduce cost and reduce the possibility of disputes later. This also includes allocation of risk in the areas of indemnity, consequential damages, differing conditions and delay.

Therefore, whether managing a small project or a large complex programme, it is essential to have a basic understanding of the different types of **contract** possible when purchasing from third parties.

! NEED TO KNOW

In the programme or project management context, a contract typically involves the exchange of money in return for goods or services; it is usually enforceable in a court of law.

A contract should define the scope of work, each party's obligation and any limits on the obligation of either party.



It is essential that the contract is:

- in writing
- clear
- concise
- complete
- signed by both parties

No single contract is best suited for all projects; however, there are various **types of contractual agreements**.

1 Fixed-price contract or lump-sum contract:

A specific price is agreed for a well-defined deliverable. The contractor usually has the responsibility of determining the work plan, pricing for the detailed scope of work and determining and evaluating the project risk.

This type of contract requires that the project scope is well defined. Work is likely to proceed in a structured manner and the contractor has a relatively high level of control.

A lump-sum contract is a common contract in construction, for example. So, the supplier agrees to provide specified services for a stipulated or fixed price. The project manager essentially assigns all the risk to the contractor, who in turn can be expected to ask for a higher mark-up to take care of unforeseen contingencies.

Payments are usually staged with an upfront payment and the remaining payments linked to certain milestones.

Any add-ons or variations to the contract required after the signing of the contract need to be negotiated separately.

Advantages and disadvantages:

- The project manager is fully aware of the price from the outset and can budget accordingly.
- An agreement between project manager and contractor with regard to the scope of work and schedule is reached before the start of the project, so everyone knows what is expected.
- The contractor is responsible for defined cost and scheduled performance; additional work must be agreed separately, which can mean additional administration and project delay.

2 Cost **reimbursable** contracts:

Cost reimbursable contracts will be used where the nature or scope of the work to be carried out cannot be properly defined or the risks associated with the work are high.

The contractor will work for a fixed period and will raise his invoice after he has completed the work.

There are various types of cost reimbursable contracts:

- Cost plus percentage of cost fee: the contractor gets paid the total cost incurred plus a percentage of fees over cost.
- Cost plus fixed fee: a fixed amount is agreed for the contractor before the work commences; the project cost incurred is paid in addition to the contractor fee.
- Cost plus incentive fee: a performance-based extra amount will be paid to the contractor over and above the actual cost.

Advantages and disadvantages:

- The project manager usually has greater risk than the contractor, who can raise an unlimited or unknown amount which the buyer must pay.
- The project manager has greater flexibility in designing and optimising the project and changing the scope over time.
- There is usually no definite completion date or limit on expenses.
- Incentives can positively affect the project speed and performance.

3 Time and material contracts:

This is a combination of a fixed and a cost reimbursement contract. Like a fixed contract, in the time and material contract the labour rate is agreed upon prior to the start of the project. However, like a cost reimbursement contract, there is no definite completion date or limit on expenses. For example, if a freelancer has an hourly rate of $15 and works 150 hours, she would earn $2,250. If she needed 200 hours to complete the task, she would earn $3,000.

Advantages and disadvantages:

- Unless there is a cap on the hours and a completion date is set, there is no limit on expenses, which puts the project manager at risk.
- The contractor has a certain amount of freedom, but knows exactly what he gets paid for the hours and work he puts into the project.
- The project manager has greater flexibility in designing and optimising the project and changing the scope over time, as there are no time limits set for the contract period.

4 **Unit-rate contracts**:

Unit-rate contracts are only suitable when the resources involved in the project are known but the quantities are unknown at the initial signing of the contract. These types of contract are often used in construction when quantities are only known when the design, engineering or construction work is completed. Therefore, the contract is based on estimated quantities of items included in the project: for example, hourly rates and resource quantities. The contractor's overhead and profit is usually included in this rate.

Advantages and disadvantages:

- There is financial risk involved for the project manager as there is no definite budget due to the unknown quantities.
- The project manager and the contractor need to have a good relationship and know each other; the project manager must be able to trust the contractor.
- Expenses need to be trackable and easy to allocate to limit the danger of overcharging.

It is important for a project manager to understand the potential hidden costs of certain decisions and the dangers that could be attached to them. The following case study highlights this fact.

CASE STUDY: CONTRACTS

Understanding the hidden costs and dangers of shortcuts

Your task is to upgrade a road to one of the business's remote properties. You solicit bids from several contractors and ask them to do it for the least cost possible, and you also stipulate that you don't want to get any permits.

None of the contractors, apart from a friend of yours with some experience, are willing to work under those conditions. So, you get your own earth-moving equipment and ask your friend to help you upgrade your road.

In the process, you fill in a spillway to a dam for a reservoir. You think this is no big deal because the fine the business pays for that is far less than what it would have cost to hire a contractor to do the job properly.

Three years later in a heavy rainstorm, the dam breaks because the spillway has been compromised. Seven homes are washed away in the ensuing flood, leaving several families homeless. Now what was intended as a shortcut to save money ends up causing major issues. Is it so far-fetched? How often is the proper outcome of a project compromised every day because people are looking for the quick way out? You, as the project manager, have the responsibility to understand and avoid the hidden costs and dangers of a shortcut.

Source: Adapted from https://www.projectsmart.co.uk/the-hidden-costs-and-dangers-of-the-shortcut.php

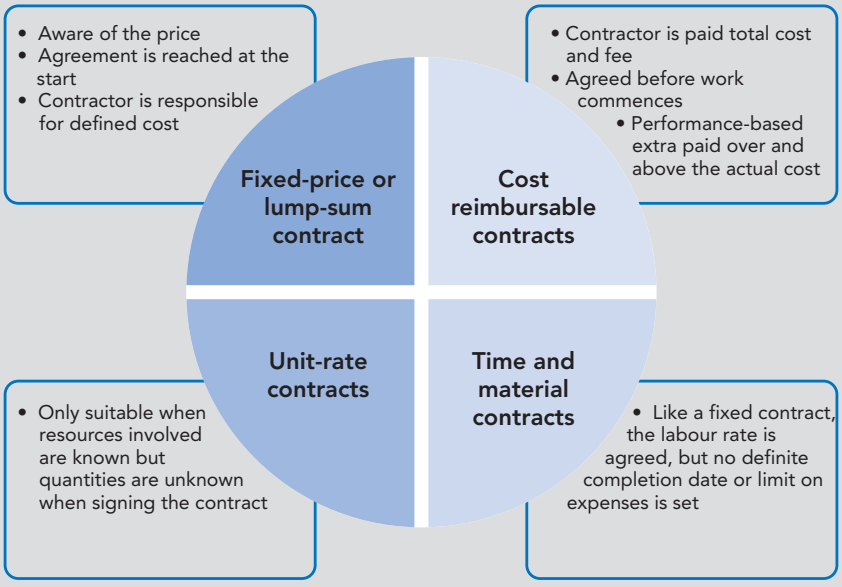


Figure 3: Various types of contractual agreements

OVER TO YOU

Activity 3: Which is the best contract to use?

Review the project you chose in Activity 2. What type of contract/s would you use for your contractors and why?

Elaborate on the project manager's responsibility to make wise choices, as the case study above shows and give examples.

1.2 Assess how the structure of an organisation can impact on the performance of project management

> *"An organisation, no matter how well designed, is only as good as the people who live and work in it."*
>
> *Dee Hock*

Different types of organisational structure

An **organisational structure** is a system that defines authority, responsibility, accountability and communication in a business organisation.

It typically includes a variety of components like:

- departments and divisions
- management **hierarchy**
- job roles
- lines of reporting
- rules, procedures and goals

The structure is usually illustrated by using an **organisational chart** that outlines how the different components interlink and relate to each other.

The primary purpose of an organisational structure must be to facilitate the achievement of the business goals in the most efficient manner. In this sense, an organisational structure is unique to each business, corporation and organisation and is a prerequisite for long-term success.

Common structures are the functional, project, matrix and mixed organisation.

Functional structure

The **functional structure** is the most common organisational structure wherein the organisation is divided into groups based on specialised functions like HR, marketing, finance and so on. Employees are classified according to their area of expertise and the specialised function they perform in a department of the organisation. They are supervised by and report to a functional manager. Most small to medium businesses are based on a functional structure. This structure works well in a repetitive and stable environment.

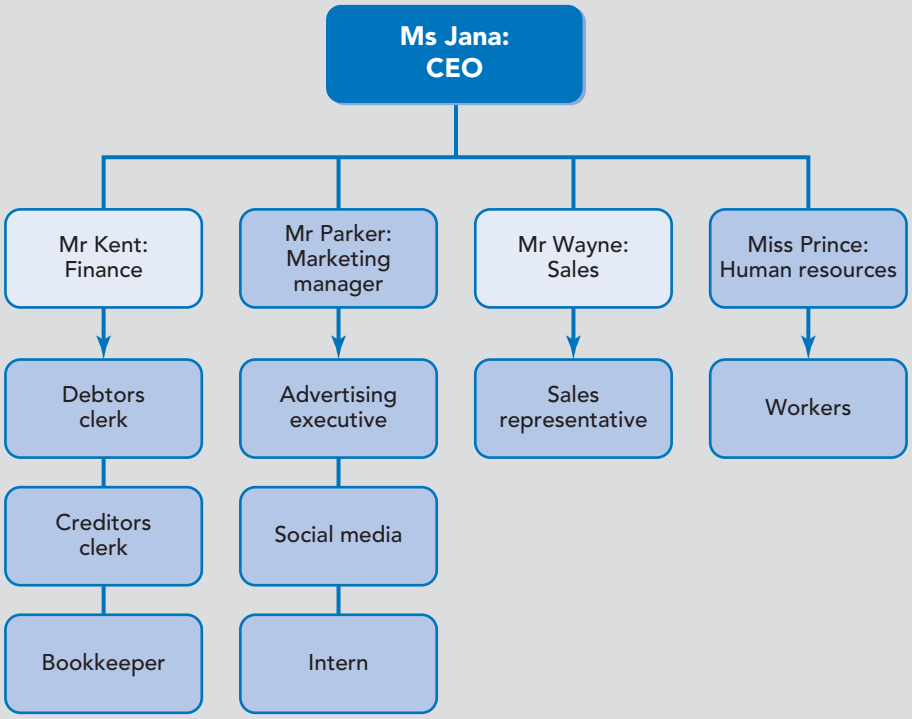


Figure 4: Example of a functional chart in a business

Advantages of functional structure:

- The combining of the employees' specialised skills and knowledge enables communication and co-operation within the department and increases the level of overall performance.
- The hierarchy, lines of authority and communication channels are very clear as the employees report to the functional manager only.
- Employee accountability is easy as the roles and responsibilities are fixed.
- The risk of work duplication is low.

Disadvantages of functional structure:

- This structure enables a self-centred, protective "department" mentality with poor communication and co-operation between departments, which might not support the overall business goals and culture.
- The rigid structure makes changes and adaptations difficult.
- Depending on the functional manager, the leadership style within the department can be **autocratic** and less team oriented.

Project structure

A **project structure** facilitates the co-ordination and implementation of project activities. The purpose is to create an environment that helps the co-operation and communication of the project team members with a minimum amount of disruption, overlaps and conflicts. Therefore, with regard to certain business goals, independent project teams are created with their own staff, project managers and dedicated resources allocated to the project. Once a project has been completed, the team members might leave the organisation, go back to their previous positions in the organisation or may be assigned to new projects.

Advantages of the project structure:

- The project manager is solely responsible for a project; each project member's task is to complete the project, which enables a high level of focus, performance and accountability.
- The project team works towards a common goal and schedule.
- Reaction and decision time is short as the decision-making responsibility lies within the project team, and ultimately with the project manager.

Disadvantages of the project structure:

- If there are several projects carried out at the same time, the separation between project teams can weaken co-operation and communication; the project teams might lose sight of the overall business goal.
- Team members' reintegration within the parent organisation might be difficult when the project ends.
- There is the risk of duplicating resources as each project requires separate resources.

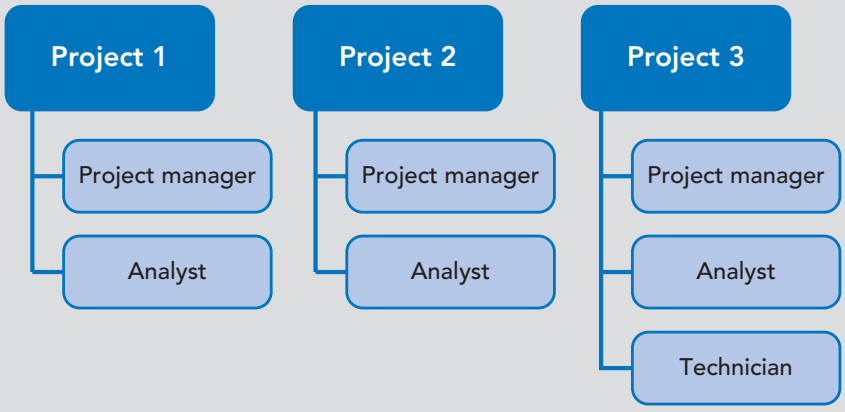


Figure 5: Project chart template

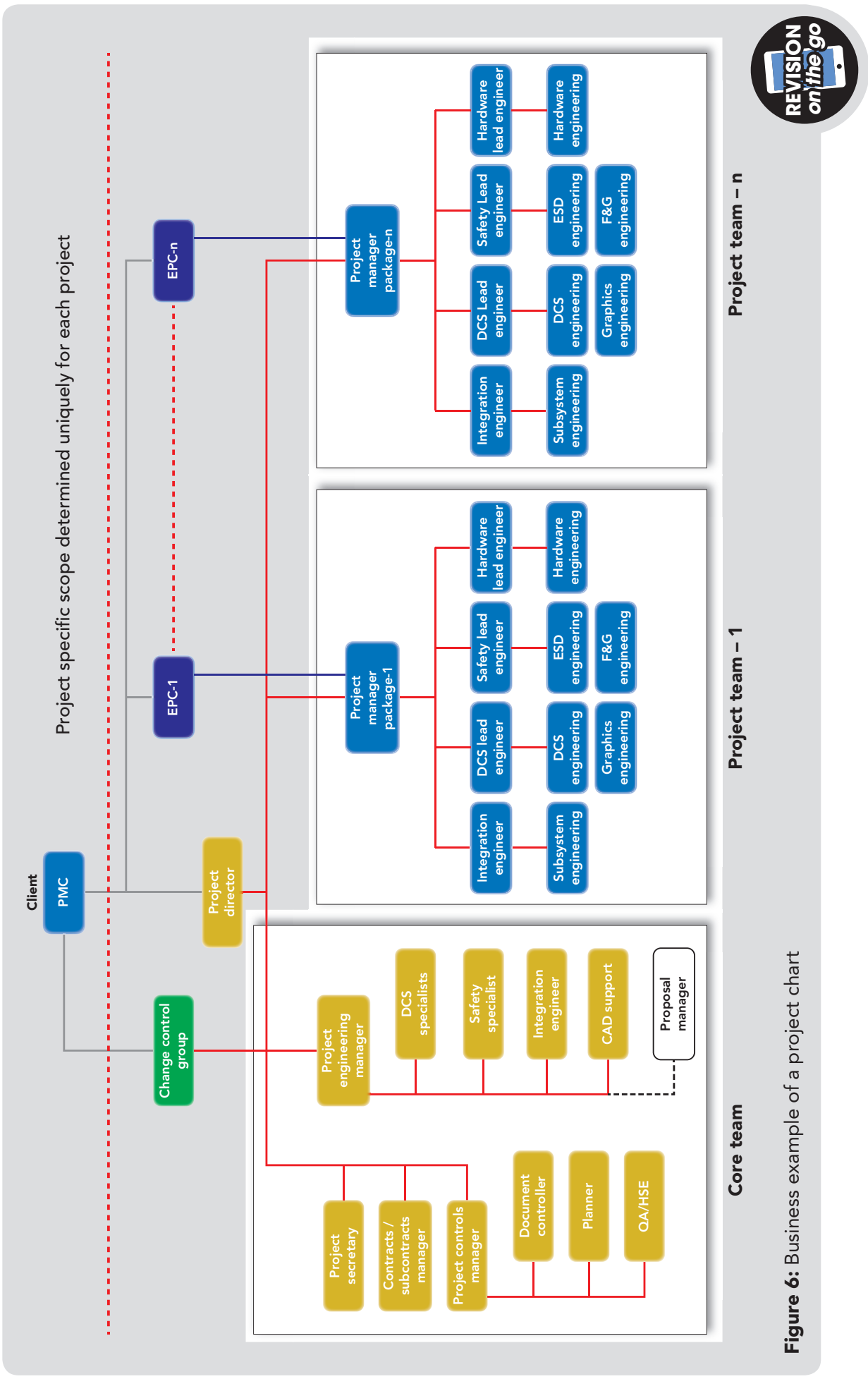


Figure 6: Business example of a project chart

Matrix structure

The **matrix organisational structure** is designed to achieve specific results by using teams of specialists from different functional areas of the organisation. The reporting relationships are set up as a grid, or matrix, rather than hierarchically. This means that employees have dual reporting relationships usually to both a functional and a project manager. This structure is typically used in large multinational organisations or when a business must be highly responsive to a rapidly changing external environment.

OVER TO YOU

Activity 4: Matrix structure

Devise your ideal matrix organisational structure for the Virgin group including a recent Virgin project of your choice. Elaborate on the staff requirement for the project and the departments from which you will resource them.

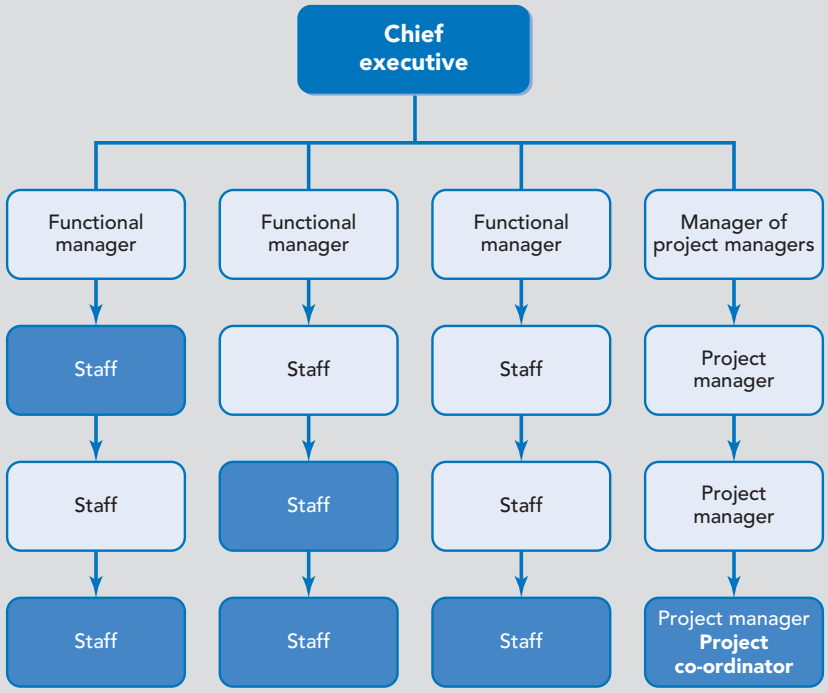


Figure 7: Members of a project team (shown in dark blue)

Advantages of the matrix structure:

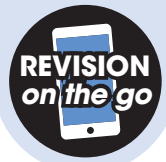
- This more dynamic structure enables co-operation and communication across boundaries and therefore facilitates business integration and working towards the overall business goals.
- Employees' specialised knowledge and skills can be shared between functional units and projects.
- This structure grows a business culture of continuous learning and adaptation to change in the competitive environment.

Disadvantages of the matrix structure:

- Reporting to a project and functional manager can cause confusion and conflict for the employees.
- The structure can cause a struggle for power and authority between the functional and project manager.
- Higher work load for the employees as they are required to fulfil their functional responsibilities and additional project work.
- This structure requires a high number of managers in the organisation and other resources, and therefore is costly.

NEED TO KNOW

In practice, forms of organisations are not always as clearly defined as this. Often, especially in large companies, functional, mixed and projectised organisational forms exist side-by-side. For example, in many big manufacturing companies the pure **project organisation** exists separate to the parent organisation to deal with various types of products, technologies and markets. In practice, it can be too restricting even to stick to one or two specific project organisation forms. However, this runs the risks of conflicts in and between projects due to the increased duplication, overlapping authority and friction between project and functional management.



OVER TO YOU

Activity 5: The advantages of matrix organisation

Explain the advantages of the matrix organisation in comparison with a functional organisation specifically regarding your chosen business and project.

Organisational structures and project management

The organisational structure has a major impact on the management and the success of a project. This structure defines:

- who has the authority over a project and makes the decisions;
- who controls the budget;
- who communicates with and reports to whom;
- how resources are allocated.

Functional structure

In the **functional structure** a project manager has little influence over a project and is primarily responsible for co-ordinating project efforts through the respective functional managers. Project resources, budget and staff usually are provided at the discretion of functional managers. Staff allocated to a project often maintain their main functional responsibility and therefore only make limited resources available to the project.

This can lead to lack of responsibility, focus and resources, which can affect the project performance and consequently cause project disruptions and delays. A project that requires the participation of only one functional department is easier to handle then a project that cuts across various departments.

Project structure

The **project structure** is at the other end of the spectrum. While employees might still in principle be allocated to departments, often their main responsibility is to work on a designated project and often they report directly to the project manager who has significant authority. This is especially true in what is called a "pure project organisation", where the project manager has total control over a project and independence concerning the project resources, budget and staff.

This enables focused and committed performance of team members, quick project decisions and the smoother running of the project overall.

Matrix structure

A matrix structure combines characteristics of both the functional and project structure.

The main advantages of the matrix structure for project management are that:

- individuals can be chosen according to the needs of the project;
- project managers have authority and decision-making power;
- required resources can be made available as and when needed.

A disadvantage of the matrix structure is its complexity, which can be difficult to manage. For example, if the functional manager and the project manager do not communicate well, the team members can be caught in the middle, causing confusion and delaying project decisions.

Depending on how closely the organisation is aligned to either the functional or project structure, a further differentiation is made between:

- a weak matrix structure (more functional oriented);
- a strong matrix organisation and (more project oriented);
- a balanced matrix organisation (in between).

The organisational structures and their influences on projects are outlined below:

Organisation structure / Project characteristics	Functional	Matrix			Projectised
		Weak matrix	Balanced matrix	Strong matrix	
Project manager's authority	Little or none	Limited	Low to moderate	Moderate to high	High to almost total
Resource availability	Little or none	Limited	Low to moderate	Moderate to high	High to almost total
Who controls the project budget	Functional manager	Functional manager	Mixed	Project manager	Project manager
Project manager's role	Part-time	Part-time	Full-time	Full-time	Full-time
Project management administrative staff	Part-time	Part-time	Part-time	Full-time	Full-time

Table 5: Organisational structure influences on a project

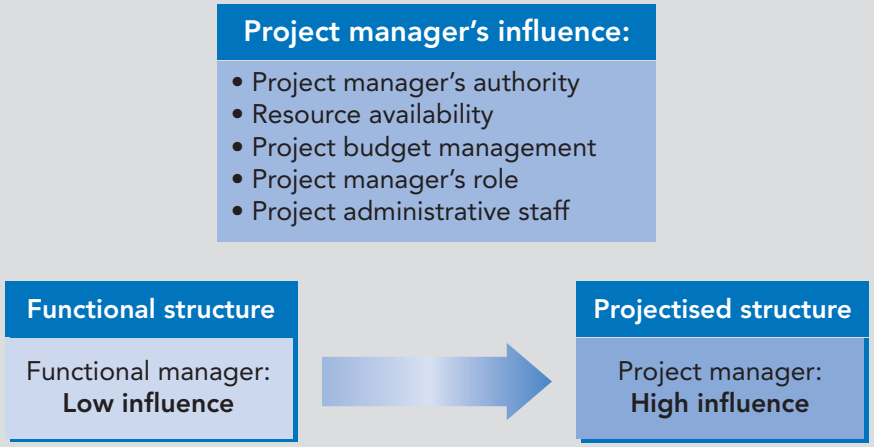


Figure 8: Organisational structure influences

1.3 Analyse the external business and competitive environment within which a project is undertaken

> *"I have lived by one crucial principle since I was 24 years old. I don't blame or complain about things like the economy, the government, taxes, employees, gas prices, or any of the external things that I don't have control over. The only thing I have control over is my response to these things."*
>
> *Jack Canfield*

Evaluation of the external environment

The initial planning and ongoing review of a project must take **external business and competitive factors** into consideration. As much as the internal business structure and project set-up determine the success of a project, external factors can ultimately determine success or failure and therefore need to be properly assessed and understood.

Questions that might come up include:

- What economic and political factors are prevalent?
- Is there any current legislation that regulates the industry or are there likely to be changes that will affect the industry and the project?
- Are there any environmental concerns?
- What technological innovations affect the industry and market structure?

PESTLE analysis

The **PESTLE analysis** is a useful tool for you to understand how external macro environmental influences might impact a project, either positively or negatively.

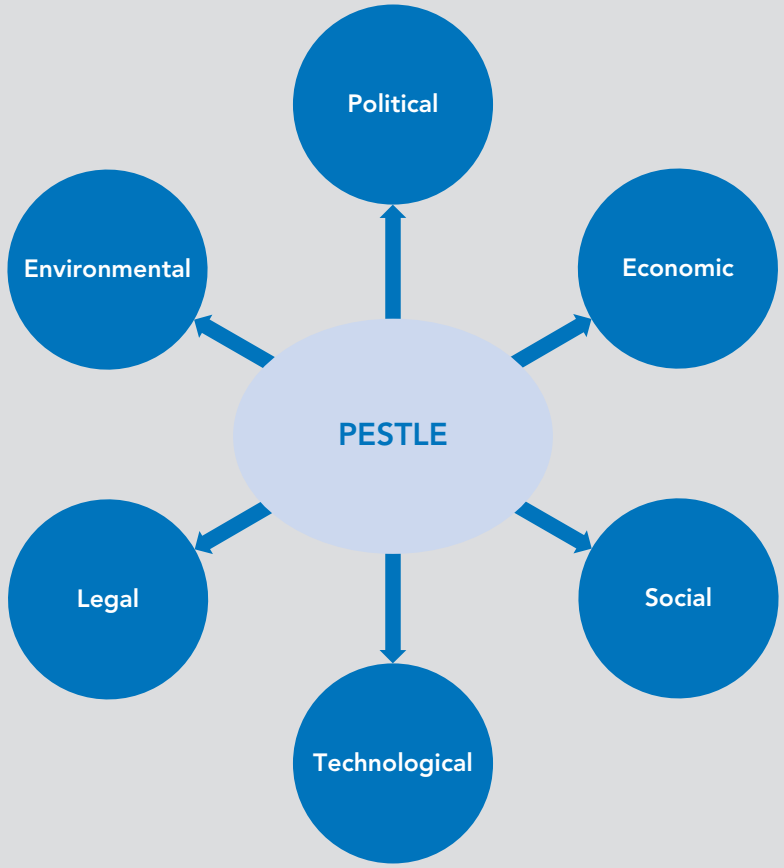


Figure 9: The PESTLE analysis summarised

The PESTLE analysis looks at the external environment in terms of the following:

1 **Political**: the impact that government factors and changes to legislation will have on a project, especially with regard to:

- regulatory processes
- government policies
- changes in government
- trading policies
- taxation
- wars and conflicts
- lobbying/pressure groups

2 **Economic**: the performance of the global, national and local economy and related factors that directly impact on a project, for example:

- current/future domestic economy pressures and opportunities
- current/future international pressures and opportunities
- general and specific taxation
- specific industry factors
- **market trends** and cycles
- market routes
- distribution
- interest and exchange rates

3 **Social**: the social and cultural scenarios and statistics that will impact a project, for example:

- lifestyle choices
- media and public relations
- branding
- consumer habits
- ethics
- equality and diversity

4 **Technological**: this element looks at technology and innovations that may affect a project, for example:

- rival technologies
- technological progress
- changing use of technology
- data storage
- technological legislation
- lifespan of technology
- licensing/patents/copy writing
- associated independent technology

5 **Legal**: this factor will examine legal dimensions; the laws and regulations that can impact on a project, for example:

- new legislation
- import and export
- employment law
- equal opportunity
- intellectual property rights

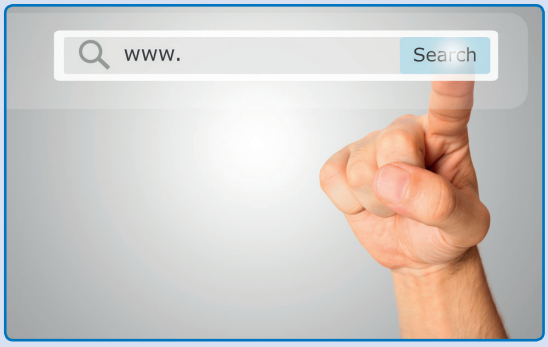
6 **Environmental**: all aspects to do with the environment impacting on a project, for example:

- climate and weather
- geographic location
- recycling and waste
- green technologies
- carbon footprint
- sustainability

The case study below highlights how examining external factors and aligning decisions accordingly can help a business to get ahead in the market place.

CASE STUDY: MICROSOFT

How Microsoft challenged Google on its home turf



What happened? Ten years after its founding, Google had managed to become dominant in search and search advertising. Microsoft was a distant third, and a deal to buy Yahoo had fallen through. Though already in a very strong financial position, Microsoft wanted a bigger piece of a rapidly growing business.

The case tracks Google's rise, Microsoft's initial search efforts, and Microsoft's push for real innovation in 2008, which led to Bing! in 2009. Microsoft decided to focus on how it met such challenges in the past, focusing on "user experience, the business model, and the ecosystem of the industry in question," along with a significant marketing effort.

Microsoft's example shows how important a thorough analysis of the external environment is as a base for strategic business decisions.

Source: Adapted from: http://read.bi/2tusANR

How to conduct the PESTLE analysis

The project team needs to have a clear understanding of all internal and external factors influencing the project. A structured approach and the involvement of the project team ensure the best possible outcome of the PESTLE analysis.

The following process will identify key external factors impacting the project.

- In a **brainstorm** meeting, the project team will raise as many factors as possible in the **PESTLE** areas and categorise them as opportunities or **threats**.
- The team then filters the relevant factors and keeps the most relevant ones.
- As the next step the team defines and rates these factors as per impact, importance and probability.
- The project team will then determine and plan how to exploit or avoid these factors.

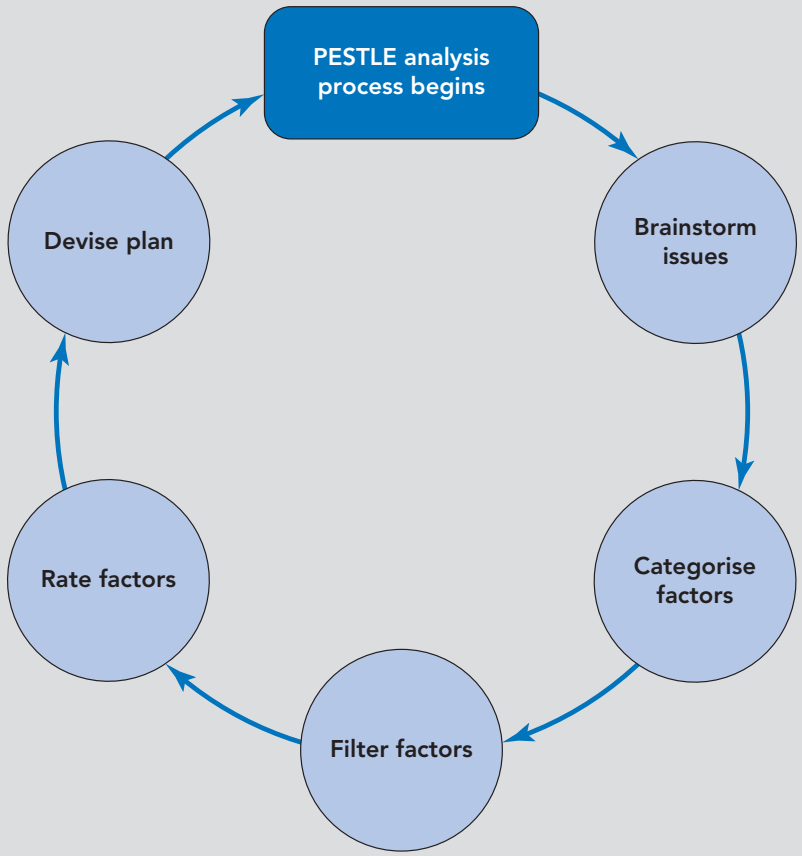


Figure 10: PESTLE analysis process summarised

OVER TO YOU

Activity 6: Microsoft PESTLE analysis

Consider the Microsoft case study and carry out a PESTLE analysis for when Microsoft wanted to obtain a bigger share in the market.

The project management triangle

During the **PESTLE** analysis, it may become obvious that certain external factors impose time and resource constraints on a project and limit options.

Examples of projects with **time** constraints are building projects that need to be finished in the summer months due to changing weather conditions, or projects aiming to introduce a new technological innovation ahead of the competition.

Resource constraints might affect a project by the lack of skilled workers for a new product line in a manufacturing business or wage levels that are too high, which will reduce the number of staff a project can afford.

The three key project attributes that need to be handled effectively for a project to run smoothly and successfully are project scope, time and cost – known as the **project management triangle**.

Figure 11: Project management triangle including time, cost and scope

1 **Time** refers to the actual time required to bring a project to completion with the desired outcome; it therefore affects the schedule. The time required is dependent on the scope of the project and the resources available.

2 **Scope** refers to the functional elements that when completed comprise the project. Even though the scope is usually defined up front, it can change over the duration of the project. The scope determines the resources required and the time/schedule of the project.

3 **Cost** is the estimated amount of money required to complete the project. It is determined by all the resources and aspects of the project that have a monetary component, for example, wages or bills for materials.

None of the three components of the **project management triangle** can be changed without having an impact on the others. A mid-project increase in scope will most likely increase the cost of the project. For example, in construction, the decision to increase the floor size of a building will increase the labour and material cost as well as the time required to finish the building.

NEED TO KNOW

To run a project smoothly and efficiently, the project managers must be able to understand and assess time and resource constraints and the costs attached to them. Balancing time and resource constraints significantly impacts a project's cost-effectiveness. For example, you may be able to hire enough extra staff to meet a difficult deadline, but if the cost of hiring the staff exceeds the projected profits it may not be worth it to meet the time constraints.

The following case study gives an overview of how a big project can develop and run over budget.

CASE STUDY: THE CHANNEL TUNNEL

The Channel Tunnel Construction Project

It took seven years to complete the channel tunnel project, involving 15,000 workers at the height of construction. The project commenced in 1988 and the tunnel was in operation by 1994. The three tunnels (two for rail and one for maintenance) made use of eleven tunnel boring machines on each side of the channel to cut through the chalk.

The shuttle terminals are at Folkestone, Britain and Coquelles (near Calais, France) and the main aim of constructing a 50 kilometre tunnel, of which 30 kilometres are underwater, was to allow people to travel between Britain and France in 35 minutes.

Definition of the roles and responsibilities of the project sponsor and the project manager

The project managers were appointed after the agreement was signed. Separate project managers were appointed to manage the British side and the French side; they were Atkins and Partners (UK) and Setec (France) respectively. "During the **initiation phase** the project managers planned the project, agreeing on milestones and determining the tasks that would need sub-contracting. The project sponsors, Eurotunnel, justified the funding required and set up the success criteria".

During the **equity phase** the project managers did not have a very big role.

The initial plan to open the tunnel by May 1993 meant that the **design phase** was brief and paid insufficient attention to accuracy and detail. The result was that delays were felt later in the project. In the design stage, the project managers were handling the overall direction of the project and ensuring that the design met the specifications. Eurotunnel set the time, cost, and quality specifications and constraints. As all major design changes had to be approved by the sponsor this exacerbated delay in the project.

During the **development phase**, the project managers had to make a variety of managerial decisions to maintain and bring the project back on the required time schedule. The project managers were also responsible for ensuring there was sufficient linking of tasks. The two teams met monthly to review progress and adapt schedules. Eurotunnel monitored the project progress objectively. Eurotunnel also reviewed and had final say on all major changes made to the design in this phase.

The **delivery phase** is when the project manager and the sponsors evaluate the project and agree whether the deliverables have been met. The contractors (TML) and the project managers then handed over responsibility for the channel tunnel to Euro-Tunnel who would have to fulfil the Concessions agreement for the period that they had contracted to run the Tunnel.

Original project objectives

Time

The first train carrying passengers and their cars travelled to France from England on the 22nd December 1994. The tunnel was originally supposed to be ready on the 15th May 1993, making the project more than one and a half years behind schedule.

Cost

This was the largest privately funded project in history. The two governments did not get involved in the funding of the project – this was the only basis on which Margaret Thatcher, the British Prime Minister, would accept the project.

The final costs in 1994 were 80% over budget. The shortfall was largely due to underestimation of rolling stocks, changes in the fixed equipment work and terminals as well as the initially poor tunnelling process.

Quality

Independent engineering organisations (for example Intergovernmental Commission (IGC) and Maître d'Oeuvre (Md'O)) were employed by Eurotunnel to monitor all processes of the tunnel project. Quarterly reports were submitted to both governments and the banks involved to keep them updated on whether the project was proceeding in accordance with the requirements of the Concession and the quality assurance standards established by TML.

Source: Adapted from https://www.ukessays.com/essays/construction/the-channel-tunnel-project-construction-essay.php

1.4 Assess the strategic fit between major projects and corporate business strategy

Identify the business strategy

Taking the internal and external environment into consideration, a **strategy** defines where the organisation wants to be, how it is going to get there and in what time frame.

A fundamental principle in management is that everything undertaken within an organisation must be in support of the organisation's strategy. Therefore, it is essential that projects are aligned with the organisation's strategic direction to facilitate the achievement of an organisation's business objectives.

In practice, strategy exists on various levels within an organisation, for example, the **corporate strategy** impacts the overall organisation, the **business strategy** a division, and the **functional strategy** the operation. A project example supporting the overall organisation is the implementation of a corporate IT system, supporting the business strategy is the implementation of a divisional management information system, and supporting the functional strategy is the implementation of new procedures and policies.

Even though a clearly defined and communicated business strategy is essential, smaller businesses especially do not always take the time to develop their strategy. However, for a project to be successful it is important that it fits with the organisational strategy and supports the current and future business goals.

A helpful starting point and tool to get clear on the business strategy is the **MOST analysis**, which evaluates the following four elements:

1 **Mission**: where the business intends to go.

2 **Objectives**: key goals to achieve the mission.

3 **Strategy**: ways and options to move forward to achieve the mission.

4 **Tactics**: strategy put into action.

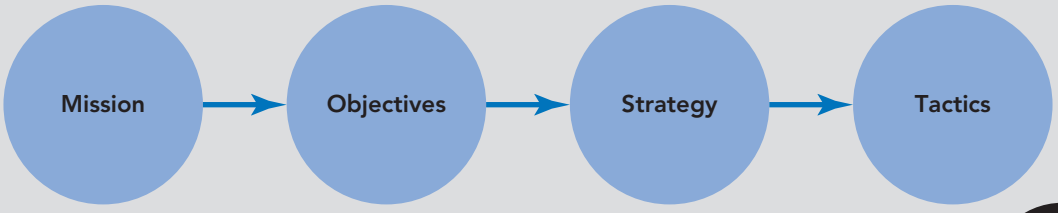


Figure 12: MOST analysis expanded to show the order of progression

This tool is meant to work from the top down, with each successful point becoming a little more specific as it goes. One step builds on the next and it is important to examine the mission, the objectives, the strategy and the tactics in that order.

Mission

The mission reflects very specifically the overall reason for being in business and what the business wants to accomplish. Defining the mission is of utmost importance for ensuring the future success of the business. At this stage, it is also important to define the values the business wants to adhere to, as these determine the business culture and internal and external communication.

Apple's current mission statement as of 2017 is: "Apple designs Macs, the best personal computers in the world, along with OS X, iLife, iWork and professional software. Apple leads the digital music revolution with its iPods and iTunes online store. Apple has reinvented the mobile phone with its revolutionary iPhone and App store, and is defining the future of mobile media and computing devices with iPad."

It is different from Steve Jobs' original ideals, which are encapsulated in his mission statement: "To make a contribution to the world by making tools for the mind that advance humankind."

OVER TO YOU

Activity 7: The importance of the mission statement

Discuss the differences in the two Apple mission statements. How would the difference affect major projects within the Apple organisation?

> *"Without a mission statement, you may get to the top of the ladder and then realise that it was leaning against the wrong building!"*
>
> *Dave Ramsey*

CASE STUDY: MISSION STATEMENTS

GoGilvah's mission statement

"GoGilvah is an online platform and community connecting women entrepreneurs owning, running or planning start-ups and businesses with expert advisors and experienced business leaders.

GoGilvah offers a unique resource of committed, creative and compassionate experts focused on the common purpose – to grow your business. Get advice on all aspects of business from creating a marketing plan to building an international strategy to training and managing a leading team.

Our goal is your success."

Source: www.gogilvah.com

Another example of a **mission** would be to become the top residential estate agency business in the town.

Objectives

Objectives are measurable and **tangible** goals that support the mission; they should be specific enough to guide your decision-making and planning for the future.

Following the example above, you would set objectives such as: sell x number of houses every month, reach X% of sellers and purchasers.

Strategy

The strategy sets out the actions you are going to carry out in order to reach your objectives.

To reach the objectives, your strategy might be to improve your website, give discounts on commissions or run an advertising campaign.

Tactics

Tactics are the specific details that guide your daily activities to enact the strategies. For example, if your strategy is to improve your web presence, your tactic would be to engage a web designer, talk through what you want your website to achieve and so on.

Determine the **strategic fit** of a project

Once you have finalised the **MOST analysis**, you and the project team can run a project **appraisal** process that determines the strategic fit of the project.

There are different ways to determine the strategic fit for a project, one of them introduced by Johnson and Scholes evaluating strategic options against the three key success criteria:

1 Suitability – would it work?

Suitability deals with the overall rationale of the strategy. The key point to consider is whether the strategy would address the key strategic issues underlined by the organisation's strategic position.

2 Feasibility – can it be made to work?

Feasibility is concerned with ascertaining whether the resources required to implement the strategy are available, can be developed or can be obtained. Resources include **funding**, **people**, **time** and **information**.

3 Acceptability – will they work it?

Acceptability is concerned with the expectations of the identified stakeholders (mainly shareholders, employees and customers) in regard to the expected performance outcomes, which can be return, risk and stakeholder reactions.

Another approach is to determine the mission appraisal, strategic objective appraisal and the business **domain** appraisal.

OVER TO YOU

Activity 8: Appraising a project

Use Tables 6, 7 and 8 below to evaluate your chosen project. Work through each table and explain your findings.

Mission appraisal

The **mission appraisal** determines whether the project supports the business mission in terms of the business purpose, business scope, future positioning and the defined values and principles. To proceed with a project that does not support the above simply means wasting resources.

Category	Question	Possible response	Possible response
Purpose of organisation	Does the project support the purpose of the organisation?	If NO, proceed to next question.	If YES, give a score 1–10 with 10 being the highest.
Organisation business scope	Does the project support the business scope of the organisation?	If NO, proceed to next question.	If YES, give a score 1–10 with 10 being the highest
Organisation future position	Does the project support the future positioning of the company?	If NO, proceed to next question.	If YES, give a score 1–10 with 10 being the highest
Organisation values and principles	Does the project support organisation values and principles?	If NO, proceed to next question.	If YES, give a score 1–10 with 10 being the highest.
Scoring (add scores)	Below 20, then there is little or no strategic fit.	10–20, then strategic fit is doubtful, so reassess project requirements.	Above 30, good strategic fit, proceed to Stage 3.

Table 6: Mission appraisal

Strategic objective appraisal

The strategic objective appraisal determines if the project supports the strategic objective of the business.

In your view, are the organisational objectives:	
Specific?	Give a rating 1–10 with 10 being the highest.
Measurable?	Give a rating 1–10 with 10 being the highest.
Achievable?	Give a rating 1–10 with 10 being the highest.
Realistic?	Give a rating 1–10 with 10 being the highest.
Time bound?	Give a rating 1–10 with 10 being the highest.
Acceptable to stakeholders?	Give a rating 1–10 with 10 being the highest.
Consistent with mission?	Give a rating 1-10 with 10 being the highest.

Scoring: Add scores	
If the score is below 50:	define organisational objectives in a way that makes it possible for them to be measured against targets within a specified time horizon.
If the score is above 50:	does the project support the organisational objectives? Score 1–10 with 10 fully supporting the organisational objectives.
If the score is less than 50:	it suggests there is little or no strategic fit.
A score of 50–60:	suggests a doubtful strategic fit. Reassess project requirements.
A score above 60:	suggests a strategic fit and proceed to Stage 4.

Table 7: Strategic objective appraisal

Business domain

The appraisal of the business domain determines:

- If the project to be carried out is in line with the business operating environment and if the business has the necessary resources to carry it through.
- If there are likely to be any negative implications in terms of resources and long-term influences on future growth.
- If the project meets stakeholders' expectations.

Question	Possible response	Possible response
Does the project support the organisation's line of business?	If NO, proceed to next question.	If YES, give a score 1–10 with 10 being the highest.
Does the organisation support the harmonisation of business activities within the operation environment?	If NO, proceed to next question.	If YES, give a score 1–10 with 10 being the highest.
Does the organisation have (or could have) the available resources to conduct the project?	If NO, proceed to next question.	If YES, give a score 1–10 with 10 being the highest.
Does the project have a resource implication, exposing the organisation to economic non-sustainability or resource failure?	If NO, proceed to next question.	If YES, give a score 1–10 with 10 being the highest.
Will the project outcomes likely be aligned with stakeholder expectations?	If NO, proceed to next question.	If YES, give a score 1–10 with 10 being the highest.
Will undertaking the project likely have a negative effect on the organisation's future growth?	If NO, do nothing.	If YES, give a score 1–10 with 10 being the highest.

Table 8: Business domain appraisal

SWOT analysis

Another helpful tool for you to evaluate a project during the project planning phase is a **SWOT analysis**. It helps to analyse **strengths, weaknesses, opportunities, and threats**. It includes specification of the project objective and the identification of the internal and external factors that are favourable and unfavourable to achieving that objective. The strengths and weaknesses usually arise from within an organisation, and the opportunities and threats from external sources.

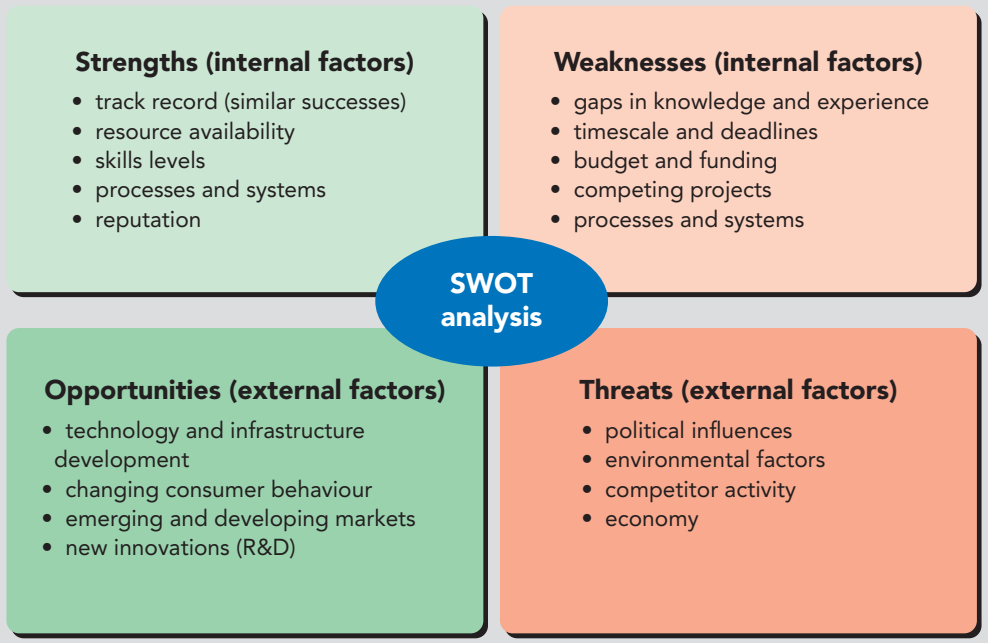


Figure 13: SWOT analysis summarised

The SWOT analysis is an important part of the project planning process:

1. **Strengths**: attributes of the organisation that help to achieve the project objective.
2. **Weaknesses**: attributes of the organisation that stop achievement of the project objective.
3. **Opportunities**: external conditions that help to achieve the project objective.
4. **Threats**: external conditions that could damage the project.

Within the SWOT analysis it is usual to ask the following questions:

Strengths

- Does the organisation have all the necessary talent in-house?
- Is the budget sufficient to complete all the tasks involved?
- What are the benefits of completing the project?
- Has the project manager handled similar projects in the past?
- How experienced are the team members?

Weaknesses

- Does the organisation have the resources to provide **contingency** funding?
- If the team doesn't have all the necessary skills, what areas need to be outsourced?
- Is the schedule realistic?
- What are the potential drawbacks of the project?

Opportunities

- Will this project take advantage of competitor weaknesses?
- What are the latest trends in the industry?
- Are there new technologies that the organisation should be aware of?
- Can this project help in different areas of the business?

Threats

- Are the team members difficult to replace?
- Has the new technology (if it will be applied) been tested?
- Could changing trends affect the project?
- Can the capability be copied by competitors?

Each relevant factor you determine will be listed below with examples.

Based on the **SWOT analysis** the project manager can improve the whole project or the tasks of the project team to gain better efficiency.

The five Ms

Project managers usually have to work within a project budget to make the project viable and profitable. The most effective project managers are those who can efficiently obtain and distribute the five Ms: **manpower**, money, methods, materials and machinery. Each category in the five Ms represents a project function that contributes to the financial **bottom line**.

1. **Manpower** stands for the efficiency of the project team and the people who bring the right qualifications, experience, discipline and attitude to the project. The right team is dependable and will make sure that materials, machines, money and methods are used in a productive way to achieve the goals of the project.
2. **Money** refers to the financial resources and **cash-flow** available during the project. The project team cannot run a successful project without sufficient investment and working capital for the people and resources needed in the project.
3. **Methods** refers to all the tools a project manager uses to run the project in an efficient way; these include planning, leadership and operational tools as well as statistics, reporting and accounting.
4. **Materials** includes all the materials used in the project; this can vary a great deal with each project. For example, an architectural design project requires different materials than a building project. Careful material selection and monitoring can lead to a significant increase in efficiency throughout your project.
5. **Machinery** refers to all the heavy equipment and tools used within a project. Design, installation, and maintenance of durable precise machines reduces waste, saves money, and creates more precise products.

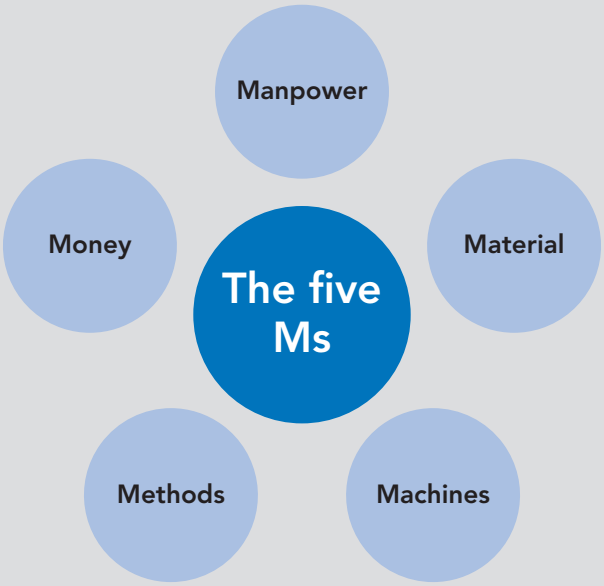


Figure 14: The five Ms of project management summarised

The following case study shows how the right strategy and overall strategy alignment will create business success.

CASE STUDY: LULULEMON

How Athletic Clothes Company Lululemon kept its cult

Lululemon Athletica is a Canadian yoga-inspired athletic company.

Christine Day took over from Lululemon founder Dennis "Chip" Wilson as the company wanted to expand and become more corporate while keeping their culture and values alive. Day grew the company from around $350 million to a multi-billion-dollar company.

Day initially faced problems like store performance, a poor real estate strategy, and barriers between various parts of the company. Her previous experience from Starbucks helped her to align the company with a strategic plan. "She even convinced the founders to attend advanced management programmes at Harvard and Stanford so they could better understand how the company must change."

Source: Adapted from http://www.businessinsider.com/most-important-business-case-studies-2012-10#how-lululemon-kept-its-cult-2

OVER TO YOU

Activity 9: Organisational and strategic management analysis

Analyse the organisational and strategic management issues at Lululemon regarding project management, based on the case study above.

READING LIST

Svetlana J.K. Cicmil, (1997) "Critical factors of effective project management", *The TQM Magazine*, Vol. 9 Issue: 6, pp. 390–396. (This article will be available in your online student resources.)

Wenche Aarseth, Asbjørn Rolstadås, Bjorn Andersen, (2013) "Managing organizational challenges in global projects", *International Journal of Managing Projects in Business*, Vol. 7 Issue: 1, pp. 103–132. (This article will be available in your online student resources.)

Mike Palmer, (2002) "How an effective project culture can help to achieve business success: establishing a project culture in Kimberly-Clark Europe", *Industrial and Commercial Training*, Vol. 34 Issue: 3, pp. 101–105. (This article will be available in your online student resources.)

Summary

A variety of external and internal factors affect the success of a programme or project. Therefore, it is essential in the planning as well as the implementation phase to list, evaluate and monitor all of these factors. This is to avoid surprises and to be able to put the right measures into place to support a project or programme.

Chapter 2

Human Aspects of Project Management

Introduction

Success in business as in life depends on people. Therefore, in project management, individual personalities, skills, capabilities, backgrounds and personal value systems determine very much the outcome and success or failure of an undertaking. It is important to put the right people with adequate skill sets in the right positions and to encourage learning. This chapter deals with the most important human aspects in project management.

Learning outcome

On completing this chapter, you will be able to:

2 Analyse the importance of the human aspects of project management, including leadership, management, teamwork, knowledge management and communication

Assessment criteria

2 Analyse the importance of the human aspects of project management, including leadership, management, teamwork, knowledge management and communication

2.1 Compare and contrast leadership theories and their application to project management

2.2 Critically discuss aspects of teamwork relating to the successful management of projects

2.3 Evaluate the various methods of communication that could be used by an effective project manager

2.4 Critically evaluate the principles of knowledge management and organisational learning to projects

2.1 Compare and contrast leadership theories and their application to project management

Leadership and leadership theories

> *"Leadership is the art of getting someone else to do something you want done because he wants to do it."*
>
> *Dwight D. Eisenhower*

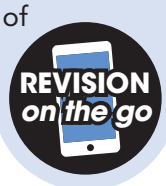
> *"The task is to lead people. And the goal is to make productive the specific strengths and knowledge of every individual."*
>
> *Peter Drucker*

Leadership happens in many areas of life. The term leadership can, for example, refer to a political leader heading up a political party, to an explorer leading his expedition team through the wilderness, to an attorney leading his team through a complex legal case, to a managing director creating and implementing a vision for the organisation to create a competitive advantage in the market, or to a project manager leading his team to successful project completion.

Leadership can refer to an individual like Donald Trump leading the USA, but it can also refer to a management team of people leading an organisation, for example, the Microsoft leadership team.

! NEED TO KNOW

Leadership looks different from person to person, because people are unique in their personalities, background, skills, knowledge, values and attitudes. Often the quality of leadership is perceived differently depending on who is judging the leader and whether that individual has the personality and position of a leader or of a follower.



Therefore, people also have different ideas of what excellent leadership looks like and what makes a great leader.

OVER TO YOU

Activity 1: Leadership

Discuss the impact that a poor leader has on a business, including its performance, culture, staff potential and development.

Leadership theories

For decades, **leadership theories** have been the source of numerous studies. In practice, many have tried to define what allows authentic leaders to stand apart from the masses and get others to help achieve their goals.

Initially, leadership theories focused on qualities that distinguished leaders from followers, while later theories looked at other factors, including situations, skill levels, and human behaviour, amongst others.

Most leadership theories can be classified as one of eight major types:

1. **"Great person" theories** assume that the capacity for leadership is inherent, and that great leaders are born not made. Examples of inherent leaders would be Abraham Lincoln, Mahatma Gandhi, Nelson Mandela, Bill Gates and Steve Jobs.
2. **Trait theories** assume that people inherit certain qualities and **traits** that make them better suited to leadership. This often identifies personality or behavioural characteristics shared by leaders.
3. **Contingency theories** focus on factors related to the environment that might determine which style of leadership is best suited for the situation, considering that no leadership style is best in all situations.
4. **Situational theories** propose that leaders choose the best course of action based on situational factors; meaning that the leader adjusts their style to fit the development level of the followers they are trying to influence.
5. **Behavioural theories** are based upon the belief that great leaders are made not born; they focus on the actions of leaders, not on mental qualities or inherent traits.

6 **Participative theories** suggest that the ideal leadership style is one that takes the input of others into account. Leaders encourage participation and contributions from group members and help group members feel more relevant and committed to the decision-making process.

7 **Management (transactional) theories** focus on the role of supervision, organisation and group performance. This management style is based on reward and punishment.

8 **Relationship (transformational) theories** focus on the connection between leaders and followers. These leaders motivate and inspire people by helping group members to see the importance and the greater good of the task.

Figure 1: Leadership theories

Leadership versus management

> *Management is doing things right; leadership is doing the right things.*
>
> *Peter Drucker Warren Bennis*

> *As we look ahead into the next century, leaders will be those who empower others.*
>
> *Bill Gates*

Leadership and management are often perceived to be the same thing; however, there is a clear distinction between the two.

NEED TO KNOW

Management normally focuses on work and tasks using resources such as staff, time, money and equipment; whereas **leadership** focuses on achieving goals and keeping a team motivated and empowered to achieve as much as they can.

The following table shows a list of subjects and explains which angle a pure manager or pure leader would take with regard to these factors.

Subject	Manager	Leader
Make up of role	Stability	Change
Decision-making	Makes decisions	Facilitates decisions
Approach	Plans detail around constraints	Sets and leads direction
Vision	Short-term: today	Long-term: horizon
Control	Formal influence	Personal charm
Appeals to	The head	The heart
Culture	Endorses	Shapes
Action	Reactive	Proactive
Risk	Minimises	Takes
Rules	Makes	Breaks
Direction	Existing direction/keeps the status quo	New direction/challenges the norm
Values	Results	Achievement
Concern	Doing the thing right	Doing the right thing
Focus	Managing work	Leading people
Human resources	Subordinates	Followers

Table 1: Manager vs. leader

American leadership authority John Kotter of the Harvard Business School states that leadership and management are two distinct, yet complementary systems of action in organisations. Specifically, he emphasises that leadership is about coping with change, whereas management is about coping with complexity.

Table 2 gives an overview of the focus, tasks and results of management and leadership, based on Kotter.

Management	Leadership
Planning and budgeting: establish detailed steps and timetables for achieving needed results, then allocating the resources necessary to make it happen.	*Establishing direction:* developing a vision of the future – often the distant future – and strategies for producing the changes needed to achieve that vision.
Organising and staff: establishing some structure for achieving plan requirements, staffing that structure with individuals, delegating responsibility and authority for carrying out the plan, providing policies and procedures to help guide people and creating methods or systems to monitor implementation.	*Aligning people:* communicating direction in words and deeds to all whose co-operation may be needed to influence the creation of teams and coalitions that understand the vision and strategies and that accept their validity.
Controlling and problem solving: monitoring results, identifying deviations from the plan, then planning and organising to solve these problems.	*Motivating and inspiring:* energising people to overcome major political, bureaucratic, and resource barriers to change by satisfying basic, but often unfulfilled, human needs.
Produces a degree of predictability and order and has the potential to consistently produce the short-term results expected by various stakeholders (e.g., for customers, always being on time; for stakeholders, being on **budget**).	Produces change, often to a dramatic degree, and has the potential to produce extremely useful changes (e.g. new products that customers want, new approaches to labour relations that help make a firm more competitive.)

Table 2: Management vs. leadership

REVISION on the go

OVER TO YOU

Activity 2: Manager or leader?

Look at Tables 1 and 2 above and identify where you are in your development and in which area you need to improve to combine being a great leader and manager at the same time.

In today's business environment, leadership and management need to go hand-in-hand as they are linked and complementary. The best leaders and managers are interchangeable and bring both qualities to their work environment and teams.

Fred C. Lunenburg concludes in his article "Leadership vs. Management",[1] that

> *"organisations need strong leadership and strong management for optimal effectiveness. In today's dynamic workplace, we need leaders to challenge the status quo and to inspire and persuade organisation members. We also need managers to assist in developing and maintaining a smoothly functioning workplace."*

Selected leadership theories and their application in project management

Project leaders need a special set of skills and interpersonal qualities to lead their teams to successful completion of a project. Often, this requires a combination of technical skills, knowledge, strong personal management and leadership skills.

According to Craig Stephens, vice president of international consulting company Epicor:

> *"leadership is an attribute most lacking in project managers" as "typically, project managers come from a technical background and have progressed to positions of seniority based on attention to detail, but as projects become larger or more complex, other skills become more important."*

To establish what makes a good project leader, in this section we will examine selected leadership theories with regard to their relevance to leadership requirements in project management.

The theorist **Elton Mayo** developed the **Hawthorne theory** based on his research undertaken with workers at the Hawthorne plant of the Western Electric Company in Chicago in the early 1930s. He suggested that **productivity** would improve through leaders motivating employees at work. This would be achieved through making employees feel important, giving them a degree of freedom to make choices and acknowledging their social needs, for example, through:

- greater communication skills
- good teamwork
- showing interest in others
- involving others in decision-making
- ensuring the wellbeing of others
- ensuring work is interesting and non-repetitive

1 Lunenburg, F. C. (2011) "Leadership versus Management: A Key Distinction—At Least in Theory." International Journal of Management, Business, and Administration, Vol. 14., Issue 1.

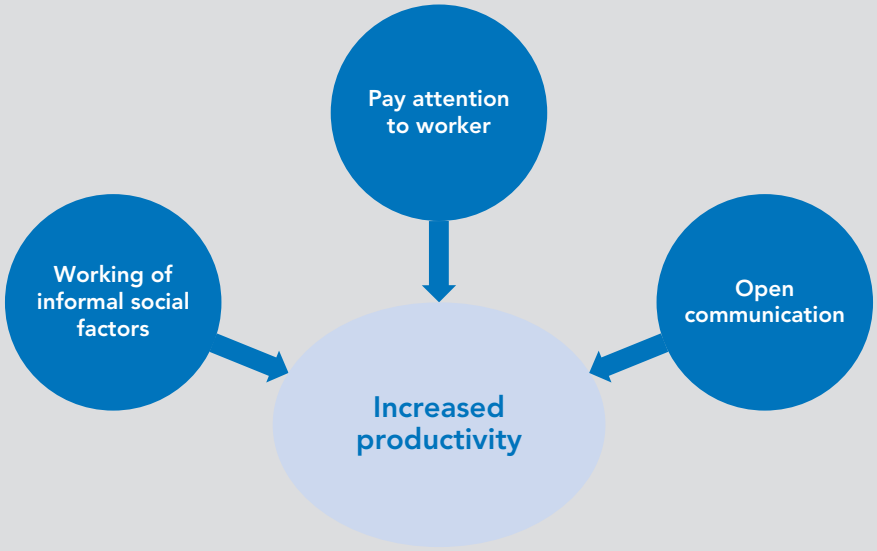


Figure 2: Ways to increase productivity

Hawthorne theory in project management

As discussed earlier, excellent project managers must possess technical skills or knowledge with regard to a project, but also leadership qualities to motivate the team to achieve the goals. The Hawthorne theory leans towards the leadership aspect of project management.

As the focus lies on the leadership aspect, the theory faces certain restrictions:

- Focus on the human aspects alone does not improve the team performance; project performance and output also depend on other factors like skills, knowledge, discipline and time management, among others.
- The Hawthorne theory places too much emphasis on group decision making. In real situations, individual decision making of the project manager cannot be totally neglected, especially when quick decisions are required, which often happens in project management.
- In project management, it is necessary that a team functions and delivers in a disciplined manner to use resources efficiently and meet tight deadlines – too much freedom can be counterproductive.

OVER TO YOU

Activity 3: The Hawthorne theory

Please identify the pros and cons of the Hawthorne theory with regard to a technical oriented or manufacturing project.

McGregor's X and Y theories

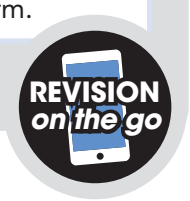
In the 1960s, social psychologist Douglas McGregor developed two contrasting theories that explained how leaders' beliefs about what motivates their people will affect their leadership style. He labelled these **Theory X** and **Theory Y.**

If you believe that your team members dislike their work and have little motivation, then, according to McGregor, you'll likely use an authoritarian style of management. This approach is very "hands-on" and usually involves **micromanaging** people's work to ensure that it gets done properly. McGregor called this Theory X.

On the other hand, if you believe that your people take pride in their work and see it as a **challenge**, then you'll more likely adopt a participative management style. Leaders who use this approach trust their people to take ownership of their work and do it effectively by themselves. McGregor called this Theory Y.

Theory X	Theory Y
People need close supervision.	People want independence in their work.
People will avoid work when possible.	People seek responsibility.
People will avoid responsibility.	People are motivated by self-fulfillment.
People desire only money.	People naturally want to work.
People must be pushed to perform.	People will drive themselves to perform.

Table 3: McGregor's Theory X and Theory Y



Theory X and Y in project management

Project managers who believe that their team members dislike their work and have little motivation are naturally more inclined to micromanage and control their team members. On the other hand, they give more freedom and participation if they feel that the team takes pride in their work and enthusiastically contributes to the success of the project. In this respect, the X/Y theories do have a place in examining leadership in project management.

However, the theories have some serious limitations which make their relevance to project management leadership highly questionable:

- The theories take quite extreme viewpoints and are not suitable for general application as the situation is unlikely to ever be this straightforward.
- Both theories work on assumptions and therefore on theoretical concepts that do not necessarily match real situations.
- Neither theory takes any other relevant factors impacting project leadership into consideration.

OVER TO YOU

Activity 4: Theory X and Theory Y

Outline the difference in leadership style between Theories X and Y. Which leadership style would you adopt as a leader? Which theory would you prefer as a team member? Give your reasons why.

The managerial grid model

The American management theoreticians Robert Blake and Jane Mouton developed the **managerial grid model** in the 1960s. This is based on their conclusion that the behaviour of a leader stems from the two criteria; people orientation (concern for people) and task orientation (concern for production).

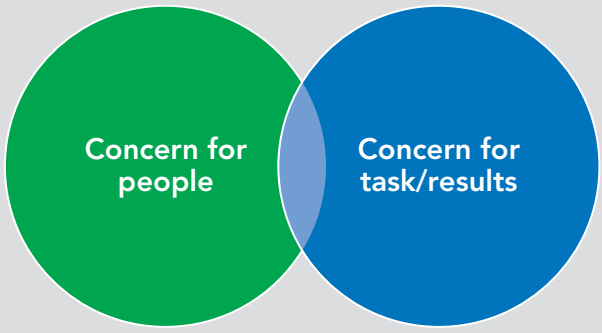


Figure 3: The managerial grid model

Through a series of questions to leaders about their leadership and management style, the position on the Blake Mouton grid is mapped in terms of their:

- **Concern for people**: the degree to which a leader considers the needs of team members, their interests, and areas of personal development when deciding how best to accomplish a task.
- **Concern for task:** the degree to which a leader emphasises concrete objectives, organisational efficiency and high productivity when deciding how best to accomplish a task.

While someone's position could be anywhere on the grid, depending on the relative importance he/she attaches to people and tasks, the Blake Mouton Grid highlights five areas, namely:

1 impoverished management
2 country club management
3 authority obedience management
4 team management
5 middle of the road management

These five leadership styles are characterised as follows:

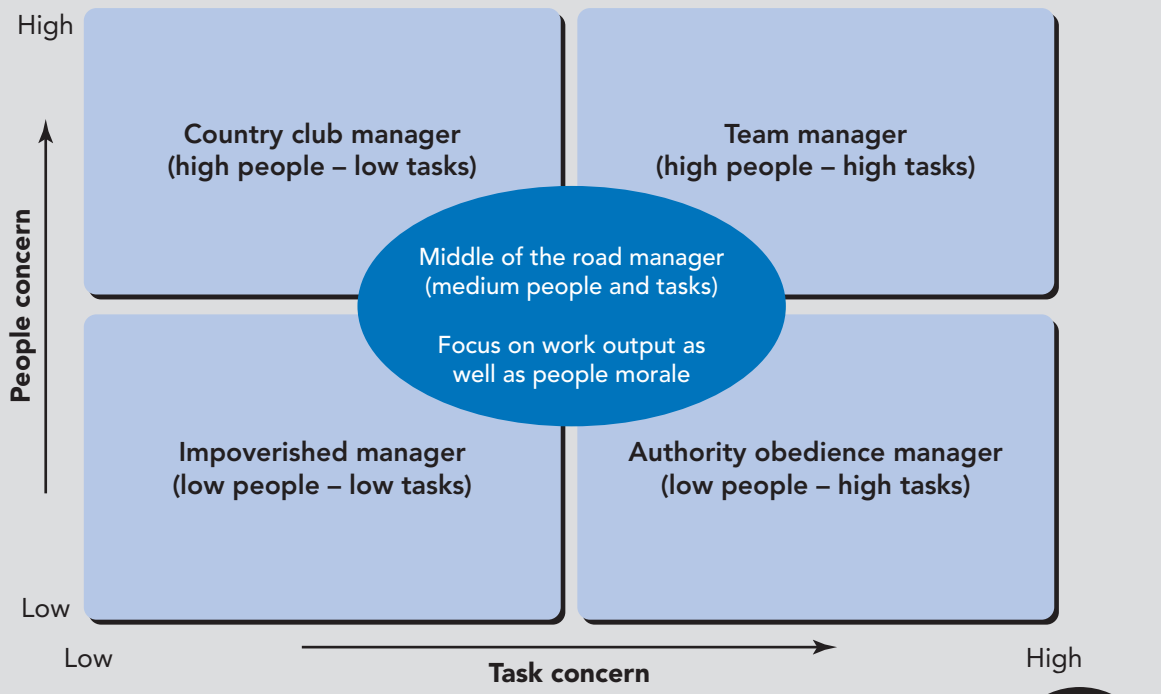


Figure 4: Blake and Mouton's Managerial Grid

Managerial grid theory in project management

The Blake Mouton Grid bases its leadership theory on the project manager's concern for either people or results and their varying degrees of importance. The theory therefore concentrates on two aspects only, which can be limiting.

In terms of project management, the most effective leadership style would be "team management". This means in practice that the project leader is passionate about their and their team's work and at the same time does their best for the people who work for them.

However, the grid also has some limitations:

- There is no such thing as a most effective leadership style based on two factors; successful leadership needs to take into consideration many other organisational, technical and cultural factors.
- The theory focuses on behavioural aspects of leadership. It does not take other factors into consideration.

- Excellent project leadership often happens in the flow. The project leader must take planned and unplanned situations into consideration and manoeuvre obstacles to the best of their knowledge and ability. In this context, the leadership style is not necessarily fixed, but can change based on the circumstances.

OVER TO YOU

Activity 5: The Blake Mouton Grid

Where would you place yourself on the Blake Mouton Grid?

Fiedler's contingency model

Fred Fiedler, a scientist who studied the personality and characteristics of leaders, created the contingency model in the mid-1960s. The model states that there is no best leadership style; instead the effectiveness of the leader is based on a combination of the leadership style and factors affecting the overall situation.

Fiedler created a three-step approach in which you first identify a leader's leadership style as either being more relationship- or more task-focused based on the **"least-preferred co-worker scale"** (LPC, see below). The scale asks you to think about the person who you've least enjoyed working with. This can be a person who you've worked with in your job, or in education or training.

You then rate how you feel about this person for each factor, and add up your scores. If your total score is high, you're likely to be a relationship-orientated leader. If your total score is low, you're more likely to be task-orientated leader.

Negative trait	Ranking	Positive trait
Unfriendly	1 2 3 4 5 6 7 8	Friendly
Unpleasant	1 2 3 4 5 6 7 8	Pleasant
Rejecting	1 2 3 4 5 6 7 8	Accepting

Negative trait	Ranking	Positive trait
Tense	1 2 3 4 5 6 7 8	Relaxed
Cold	1 2 3 4 5 6 7 8	Warm
Boring	1 2 3 4 5 6 7 8	Interesting
Backbiting	1 2 3 4 5 6 7 8	Loyal
Unco-operative	1 2 3 4 5 6 7 8	Co-operative
Hostile	1 2 3 4 5 6 7 8	Supportive
Guarded	1 2 3 4 5 6 7 8	Open
Insincere	1 2 3 4 5 6 7 8	Sincere
Unkind	1 2 3 4 5 6 7 8	Kind
Inconsiderate	1 2 3 4 5 6 7 8	Considerate
Untrustworthy	1 2 3 4 5 6 7 8	Trustworthy
Gloomy	1 2 3 4 5 6 7 8	Cheerful
Quarrelsome	1 2 3 4 5 6 7 8	Harmonious

Table 4: Least-preferred co-worker (LPC) scale

OVER TO YOU

Activity 6: What type of leader are you?

Complete the least-preferred co-worker scale above to identify what type of leader you are.

In the second step, you identify the leader's situation based on questions with regard to the following three factors:

- The leader-member relations: this establishes the level of trust and confidence that the team has in the leader.
- The task structure: this refers to the type of task the project leader is doing; clear and structured, or vague and unstructured.
- The leader's position of power: this refers to the amount of power a leader should direct, providing reward and punishment to the group.

The third step breaks down all the factors covered, like leader-member relations, task structure, and leader's power, and identifies the type of leader Fiedler believed to be the most effective in each situation (**situational variables**).

Leader-member relationship	Task structure	Leader's position of power	Most effective leader
Good	Structured	Strong	Low LPC/task-oriented
Good	Structured	Weak	Low LPC/task-oriented
Good	Unstructured	Strong	Low LPC/task-oriented
Good	Unstructured	Weak	High LPC/relationship-oriented
Poor	Structured	Strong	High LPC/relationship-oriented
Poor	Structured	Weak	High LPC/relationship-oriented
Poor	Unstructured	Strong	High LPC/relationship-oriented
Poor	Unstructured	Weak	Low LPC/task-oriented

Table 5: Fiedler's model

Imagine that you've just started working on a project, replacing a much-loved leader who recently retired. You're leading a project team who view you with distrust (so your leader–member relations are poor). The project you're all doing together is well defined (structured), and your position of power is high because you're the team leader, and you're able to offer reward or punishment to the group.

The most effective project leader in this situation would be high LPC – that is, a leader who can focus on building relationships first.

Now imagine that you're leading a project team who like and respect you (so your leader–member relations are good). The project you're working on together is highly creative (unstructured) and your position of power is high since, again, you're in a management position of strength. In this situation, a task-focused leadership style would be most effective.

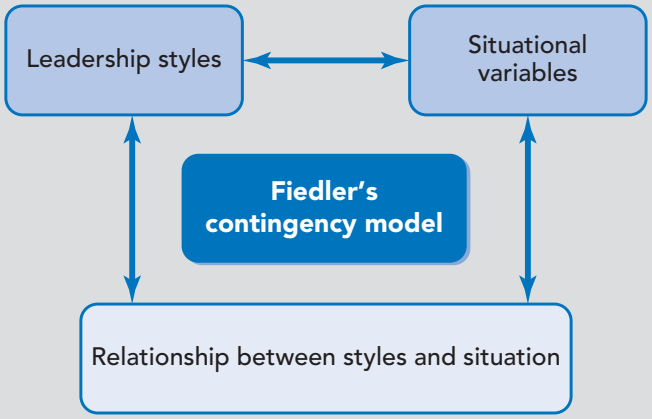


Figure 5: Fiedler's contingency model

OVER TO YOU

Activity 7: Leadership style

Can you think of a practical example that would require a leadership style to change? Are certain types of leader best suited to certain industries? Explain why you do or do not think this.

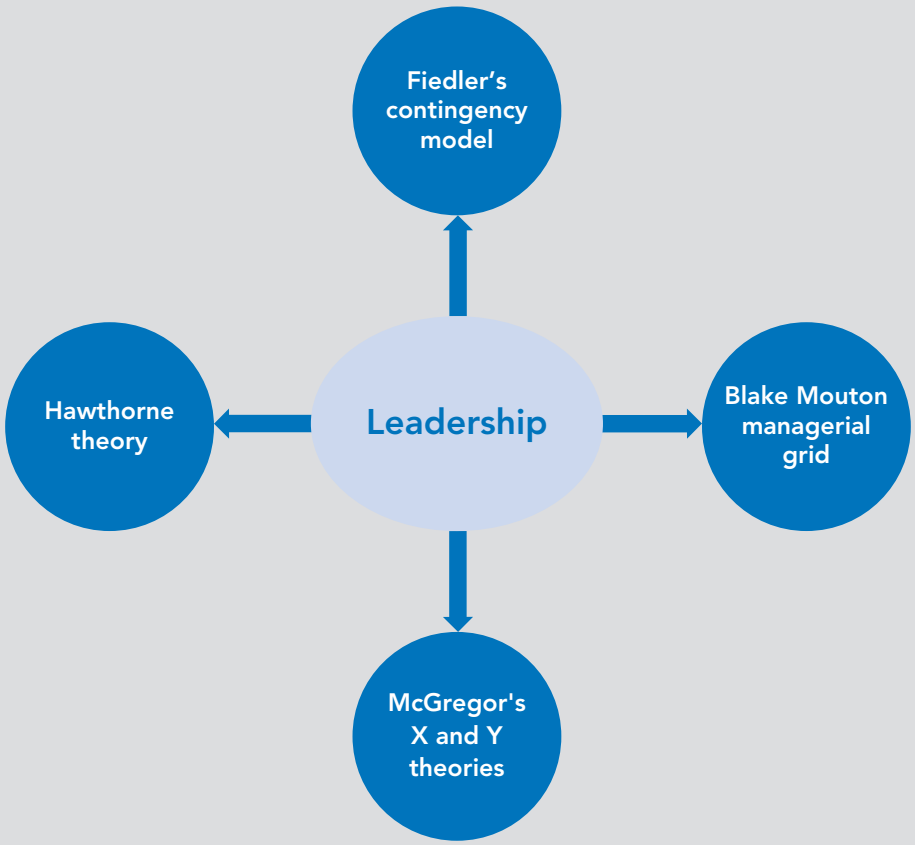


Figure 6: Selected leadership theories in project management

The contingency model in project management

Fiedler's theory is valid in practical project management as the successful running and completion of a project indeed depends on not only on the project leader's leadership style, but also on situational factors. Every project is different with regard to factors such as the task, team members, the leader, relationships, time line, organisation, budget, scope and so on. Therefore, every project requires a different leadership approach taking these variables into consideration.

In this respect, the **contingency theory** has some limitations. The main ones are:

- The theory limits the situational factors to three, which might not reflect the project reality and circumstances. It also does not take "middle ground" into consideration, but favours extreme positions with regard to the LPC scoring and evaluation of situational factors.
- It is questionable that the least-preferred co-worker scoring represents the leadership style of a project leader accurately; it does not take the individual leader characteristics into consideration.
- Where the leadership style of a project leader does not match the project situation, the theory implies that the only alternative is to exchange the leader; this can prove difficult and/or costly.

OVER TO YOU

Activity 8: Contingency theory

Draw up a table of the pros, cons, and shortfalls of the contingency theory in project management.

The Tannenbaum and Schmidt continuum

The Tannenbaum and Schmidt continuum, developed in the 1950s, is a simple model of leadership theory which shows the relationship between the level of freedom that a manager chooses to give their team and the level of authority used by the leader.

This theory is based on the idea that many classifications of leadership such as autocratic or democratic are extremes and leadership practices in real-life situations lie somewhere between the two extremes.

Tannenbaum and Schmidt propose the idea of a **leadership continuum** and place different variations of leadership practices along the continuum which move from autocratic leadership styles towards democratic. Specific leadership styles identified within the continuum include telling, selling, consulting, and joining leadership styles.

As the team's freedom increases, the leader's authority decreases and vice versa, which means that there is a scale of delegated freedom that you can use when working with a team.

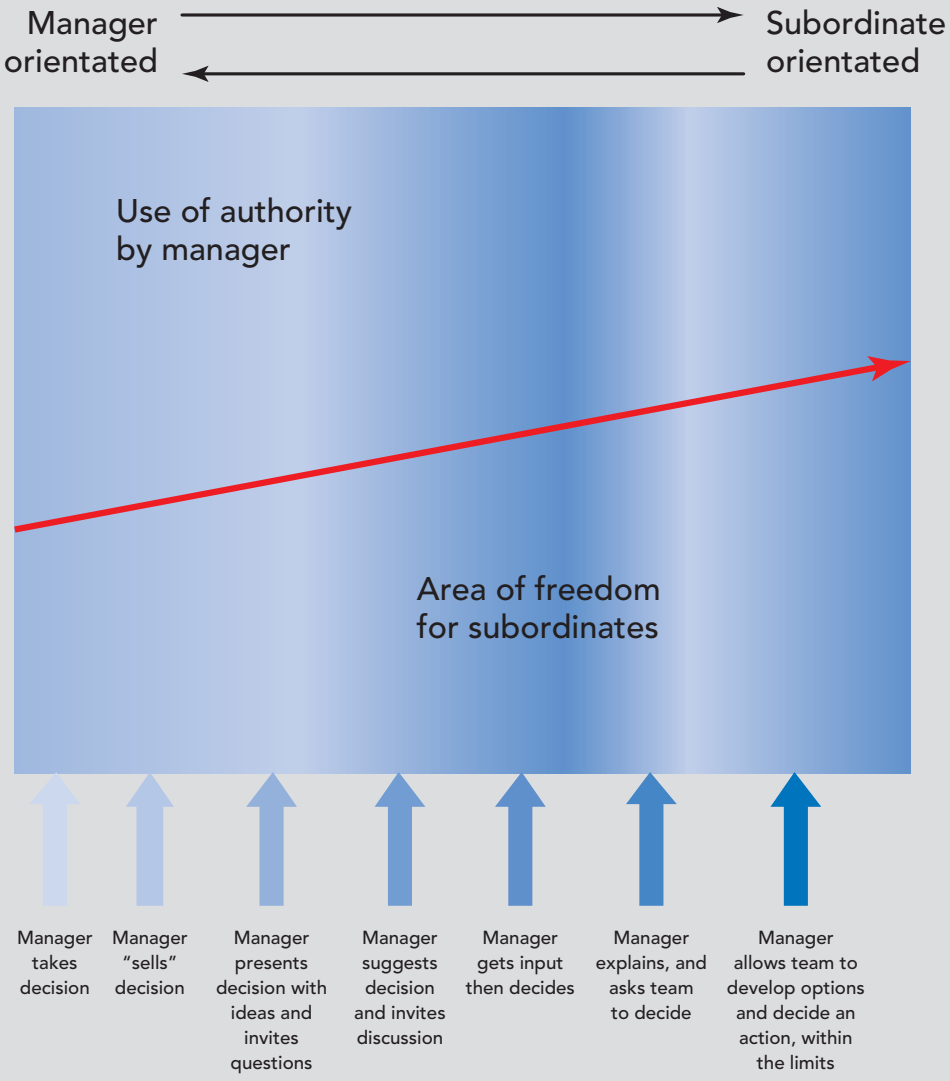


Figure 7: The Tannenbaum and Schmidt leadership continuum

The Tannenbaum and Schmidt continuum in project management

The leadership continuum theory represents a valuable framework for analysing leadership style in projects. This is because the theory provides wider options for the classification of leadership style, and thus has a reasonable level of applicability in real-life project management.

However, again it needs to be emphasised that project management and leadership are usually highly complex and depend on a variety of internal and external project factors. Therefore, even though Tannenbaum and Schmidt show the relationship between leadership authority and freedom in a team environment, the theory has serious **limitations** because:

- It does not take other relevant factors impacting the project and project leadership style into consideration.
- It does not look at the leader's personal characteristics.
- It does not look at the "how" of the implementation in a project team.

OVER TO YOU

Activity 9: Tannenbaum and Schmidt

Define the Tannenbaum and Schmidt continuum as it relates to the freedom and authority used by the leader. List and explain the limitations of the Tannenbaum and Schmidt continuum. Identify your leadership style as per the Tannenbaum and Schmidt continuum.

Kotter's theories

Kotter's definition of leadership and management claims that managers deal with complexity, whereas leaders deal with change. Kotter explains that managers and leaders both engage in the following three tasks but in very different ways:

- deciding what needs to be done;
- creating networks of people who can accomplish a task;
- ensuring that people do the job.

Kotter believes that managers ensure that work gets done through controlling and problem solving; this represents a very **task-oriented approach**. Leaders on the other hand motivate and inspire and get people to achieve goals based on inspiration through their leadership, this represents a very **people-oriented approach**.

The table below explains the focus and tasks of leaders and managers in project management based on Kotter's definition:

Project manager	Project leader
Seeks order and consistency	Seeks change and movement
During planning and budgeting – establishes agendas, sets timetables and allocates resources	Establishes a direction – looks at the big picture, clarifies the situation, creates a vision and determines strategies
With relation to staffing – provides structure, job placements and defines rules and processes	With relation to people – aligns people, communicates goals, builds the team, and looks for commitment
Focuses on control and the solving of issues by taking action to correct issues, creating solutions and defining incentives to reward good performance	Focuses on motivating and inspiring people through empowerment, looking at how to satisfy unmet needs, and energising people

Table 6: Kotter's project leadership and management definition

You can look at a project as a micro-organisation with its own staff, budget, tasks and external influences. In this respect, the project leader is equivalent to a business leader. As in business in project management, leadership and management need to go hand in hand as they are linked and complementary. The best business project leaders and managers are interchangeable and bring both qualities to their work environment and teams.

Kotter's distinction between leadership and management qualities shows the skills, knowledge and personal characteristics a successful project manager must bring to the table.

However, Kotter's approach also has certain limitations:

- It does not include situational factors affecting the project and project leader.
- It does not consider the individual leadership style of a project leader.

OVER TO YOU

Activity 10: Leadership style

Pick a leader or CEO of a blue-chip company and evaluate their leadership style. What type of leader are they in your opinion? Why do you think this?

What makes a great project leader in practice?

Being a great project leader is not easy – it takes people with special skills and characteristics to navigate the complexity that goes with managing and making a success of a project**.** Christopher Scordo, Founder of PM Training, has summarised the characteristics of great project leaders below, based on a survey of the Employment Status Indicator (EIS) in the UK.

Great project leaders, who can manage projects successfully:

1 Inspire shared team vision

Great project managers help all team members feel like they have an equal stake in a project, and **empower** everyone to share and experience the group's vision. When team members share a similar vision, they feel inspired to deliver their best.

2 Have great communications skills

Project managers need to clearly communicate goals, performance, and expectations; and they need to manage feedback coming at them from all directions. Being accessible, open, and direct is critical for being a good communicator. Further, having the ability to persuade team members to do certain tasks a bit differently, or work overtime when necessary, is equally as important.

3 Have **integrity**

Great project managers abide by ethical standards and rewarding those team members who follow suit is part of the responsibility of the job. Project management should never be motivated by self-interest; rather it is the interest of the project success that matters most.

4 Are enthusiastic

Great project managers have a bounce in their step and a can-do attitude that sets the pace for their entire team. Having good energy is critical to setting a positive example and demeanour for the team, especially when things go wrong.

5 Show **empathy**, not sympathy

Sometimes empathy needs to be shown towards team members who are struggling to cope because of outside influences. As such, a strong project manager will empathise with the team member's issues.

6 Are viewed as competent and knowledgeable with regard to the project

Team members need to feel that their project manager has some degree of expertise in the project's subject matter. As such, project leaders should have the ability to lead their team with technical expertise if the project requires it and to understand the implications of different technical challenges and opportunities.

7 Are great at delegating tasks

Great project managers understand the degree of oversight each team member requires for a given set of tasks. Assigning the right tasks to the right people and trusting them to work to the best of their abilities is a key characteristic of a great project manager.

8 Stay cool under pressure

When the going gets tough, good project managers keep going and keep things calm. The more the project manager becomes visibly stressed, the more the team and client will also become stressed. Great project managers stay cool under pressure.

9 Promote team building

For a team to move forward from a group of strangers to being a well-functioning team, a project manager must understand process dynamics. They must go through each phase of team development – even when conflict happens – and get the team to put differences aside and focus on the common goal. Great project managers foster a sense of unity within the team.

10 Know how to solve problems

Great project managers solve problems by sharing responsibility with the experts on their teams. They will understand how to set a path towards the solution even if they don't know the solution themselves. This means using the knowledge of those team members and stakeholders who have expert knowledge and setting a plan to solve tough problems by harnessing that team experience.

The case study below shows how a leader can learn from their mistakes and turn a failure into a success story.

CASE STUDY: THE HUBBLE TELESCOPE

How Charles Pellerin learnt from his biggest mistake

In 1990, NASA's Charlie Pellerin had what he calls "a life-changing experience". He was in the eighth year of leading the Hubble development team to launch the world's most anticipated telescope. His joy was short lived as the world soon discovered that the Hubble telescope had a flawed mirror, and was useless. Then, when he thought things could not get any worse, the NASA Failure Review Board announced that the root cause was a "leadership failure". Pellerin realised that as the leader of the Hubble development team, he was responsible for one of the biggest mistakes in the history of science.

After mounting the Hubble's space repair mission, he dedicated himself to understanding how social forces affect people and teams. He states that a man-made "Fifth Force" powerfully drives human behaviour, which is "social team context". Pellerin developed processes to manage the "Fifth Force" and went on to write the book *How NASA Builds Teams*. He has since successfully worked with more than 100 teams over 20 years to put this into practice. He says that he now knows "how these processes could have prevented Hubble's flawed mirror, and much more importantly, prevented Space Shuttle *Challenger's* explosion."

Source: Adapted from www.4-dsystems.com

OVER TO YOU

Activity 11: What makes a good project leader?

Can you think of additional traits that make for a great project leader in practice?

List the negative traits of project leaders that will lead to underperformance.

Draw up a table of leadership traits as summarised by Christopher Scordo, Founder of PM Training. Indicate which traits apply to you.

Figure 8: Qualities of a great leader

2.2 Critically discuss aspects of teamwork relating to the successful management of projects

The role of teamwork in project management

> *"Collaboration is the best way to work. It's the only way to work, really. Everyone's there because they have a set of skills to offer across the board."*
>
> *Antony Starr*

***Meaning of TEAM** – Together, Everyone, Achieves, More*

The case study below shows how a company turned its fortune around by changing internal factors and creating a project team that made all the difference.

CASE STUDY: CISCO

How Cisco bounced back

Cisco is a worldwide leader in IT and networking.

What happened? Cisco grew rapidly during the tech bubble, acquiring 70 companies and more than doubling its workforce. After the bubble burst, the company had to change the way it grew and developed talent, to build more talent from within instead of going out and buying it.

The company created a team to develop and leverage Cisco's talent and began the "Cisco University" initiative to promote an agile and versatile workforce. Within three years, the company had turned around and was listed as one of the top companies for leadership.

Source: Adapted from http://www.businessinsider.com/most-important-business-case-studies-2012-10#how-cisco-bounced-back-3

A team is a group of two or more persons who carry out some work-related tasks and interact dynamically with one another towards a common goal. Teamwork is the process by which a group of people work collaboratively to achieve a goal.

Depending on the overall task that needs to be achieved, a designated project can be handled by one person, but more likely by a selected team of people who bring complementary skills to the table. The required skillsets depend very much on the complexity of the project and the goals that need to be achieved.

NEED TO KNOW

The **purpose of teamwork** is to bring different but complementary skills, talents, knowledge and experience together in order to achieve a goal which otherwise would not have been achieved, especially not within the time frame.

With regard to business projects, project team members are recruited from different departments or divisions of the organisation and/or as external consultants working for the project team. This means that a project team often will consist of diverse team members with different backgrounds and personalities, who are brought together with the **common purpose** to achieve set goals and work through to the successful completion of the project.

The project team leader in this respect has a very important and not always easy role to play, especially with regard to motivating the team members individually and as a team. The team leader must "use" the resource (in the form of the team members) most efficiently to get the best out of the individuals and the team for the successful completion of the project within the time frame set during the planning phase.

In order to do this, the project leader needs a combination of leadership and management skills and good knowledge and experience with regard to team building and team work.

> *"Team building is the process of forming, growing and improving the knowledge, skills and attitudes of individuals with different needs, backgrounds and abilities into an integrated, high-performance team."*
>
> *Lauren Cleland*

Building a team

To create a solid team and save a lot of problems down the line, the project manager must carefully build their team and choose team members based on the principles below:

1. They are **team players**: it is imperative that people regard themselves as equal members of one team, show respect to each other, pull their weight and do not expect special treatment. One selfish personality can disrupt a whole team and jeopardise the project's success even if that person comes with a great set of skills and knowledge. Apart from that, it helps if team members get to know each other and form a certain friendship; after all, they usually spend a lot of time together during the project.
2. They have **complementing skills and experience**: every team member must make an equal contribution to the project in their own way. Therefore, they need the skills and knowledge required to accomplish the tasks on hand. These are not necessarily the same, but complement other team members' skills and help to achieve the goals.
3. They are **dependable, trustworthy and honest**: the members of a team need to know the project schedule and timeline in general and their required contribution to it. In that framework, they must be disciplined, reliable, responsible and accountable to themselves and the team. It is essential that team members admit their mistakes without trying to blame others and that they are not competitive overall within the team or inclined to let the team down.
4. They can **communicate well**: communication is key within the project team and outside it. Team members need to be able to express themselves and get their point across without offending other parties. They also need to be able to listen, take criticism as well as praise, settle disputes constructively and move on without hard feelings.
5. They are **committed to the project**: people only do their best work and go beyond what is asked of them when they believe in what they are doing and are committed to the project goals and the organisation they are working for. Committed people take pride in what they do, see their work almost as an extension of themselves and get enthusiastic about their individual and team achievements.
6. They are **self-starters** and **motivational**: even though it is part of the team leader's role to inspire the team members, it is also important that team members can inspire and motivate

themselves and one another. If the individual members know their roles and what is required of them, they should be able to take initiative, be self-sufficient and have a positive, driving attitude. They should also have an ability to motivate others; let's face it, we don't always have good days and it helps when someone else can pick our spirits up again.

7 They are **creative**: in projects, as in life, nothing is set in stone or either black or white. Things often change and we need to look at alternative options or solutions. Creative team members will come up with new ideas to solve problems and improve performance and will use resources and create intuitive and innovative concepts.

8 They are **resilient**: times can get tough during a project, for example, if things go wrong, deadlines loom or certain team members can't get on. It is important that teams can carry this through and that members can handle the pressure. This does not mean that individuals can't have a weak moment here or there, but team members overall need to be able to deal with and brush off problems, focus and move forward.

9 They **get the big picture**: projects are usually one piece in a puzzle that makes up an overall goal. Stakeholders and certain external influences impact the project, whether it is the competition or the political or economic landscape. Good team members and good project leaders know and understand the bigger picture. That helps with regard to motivation but also with regard to trouble shooting and decisions about changes.

OVER TO YOU

Activity 12: Teamworking

Use the acronym for TEAM in a practical example.

Within in a team how would you help to create a positive and productive work environment?

Figure 9: Attributes of a great team member

Teamwork theories and project management

Here are some views on teamwork from Apple founder **Steve Jobs**:

- Conflict is a healthy sign of a passionate team.
- Hire smart people, make them accountable and get out of their way.
- Give your team a place to share their thoughts.

Teamwork is a great way to reach great goals. However, for the project manager the task of team building and efficient team leadership can be quite difficult, especially if the project is highly complex. A good understanding of teamwork theories can help them to develop and run a high-performance project team.

A **teamwork theory** is an organised way of comprehending certain circumstances, procedures and behaviours relating to teams and teamwork.

Steve Jobs, for example, incorporated teamwork as an important part of his work and used teamwork theories in the construction of his corporate headquarters. He believed team work and frequent employee interaction to be the key to high performing teams.

The earliest formal studies of teamwork took place after World War II and focused on discovering the reasons for the failure of military teams. The first scholarly study of teamwork took place in the 1950s under the direction of psychologists examining how humans relate to themselves and others.

The major elements examined by teamwork studies include the team environment, member actions, communication used by the team, traits and roles of team members, beliefs of team members and teamwork assignments.

Two of the most important teamwork theories for project management are the Bruce Tuckman Model and Belbin's Theory of team roles.

Bruce Tuckman's Model

Created in 1965, Bruce Tuckman's Model is one of the most influential teamwork theories and has been applied in countless organisations and scenarios; it is commonly referred to as the origin for successful team building.

Tuckman identified five main stages that all teams should pass through from "newly formed" to "high performance". He called the stages: forming, storming, norming, performing and adjourning.

Figure 10: The Bruce Tuckman model

1. During the forming stage, members of the project team meet and get to know each other and learn about the tasks they will need to perform. The project leader needs to provide structure; a direction for the team, including objectives, roles and responsibilities.
2. The storming stage is characterised by interpersonal issues, conflict and polarisation, where team members challenge each other and/or the project leader and question the tasks and responsibilities. For a project leader, this is usually the most challenging phase. He must apply good conflict management skills and help to build relationships while staying calm, confident, **assertive** and positive.
3. In the norming stage, team members begin to understand and accept each other; the team comes together and will focus more effectively on the project tasks. In this phase, the project leader will keep everyone on the right track via effective communication including positive feedback and rewards.
4. The performing stage is characterised by team members accepting group norms, structures and interpersonal relations. This is a phase of high **synergies** and high performance. The project leader is increasingly free to focus on leadership activities as team members work efficiently on a more settled basis.
5. In the adjourning (or mourning) stage, as the project comes to an end, team members will experience a sense of loss. It is important that the project leader recognises the team's accomplishments, for example, with a celebration.

The Tuckman Model is a helpful tool with regard to teambuilding as:

- It highlights which stage the team building process is at.
- It helps the project leader to identify what they must concentrate on in different phases.
- It increases self- and process-awareness for the project leader and the team.

Belbin

Belbin based his theory of team roles on his observations that people always assume certain roles in a team. He classified a team role as "a tendency to behave, contribute and interrelate with others in a certain way". He derived nine roles from those he observed, and categorised them in the three groups:

- action oriented – shapers, implementers and completer-finishers
- people oriented – co-ordinators, team workers and resource investigators
- thought oriented – plants, monitor-evaluators and specialists

Figure 11: Belbin's theory

The table below highlights the strengths and weaknesses of each **Belbin team role**.

Belbin role strengths	Belbin role allowable weaknesses
Plant: creative, imaginative, unorthodox. Solves difficult problems.	Might ignore incidentals. May be too preoccupied to communicate effectively.
Resource investigator: extrovert, enthusiastic, communicative. Explores opportunities. Develops contacts.	May be over-optimistic. Can lose interest once initial enthusiasm has passed.

Belbin role strengths	Belbin role allowable weaknesses
Co-ordinator: mature, confident, a good chairperson. Clarifies goals, promotes decision making, delegates well.	Can be manipulative and might offload personal work.
Shaper: dynamic, challenging, thrives on pressure. Has the drive and courage to overcome obstacles.	Prone to provocation and may sometimes offend other people's feelings.
Monitor/evaluator: sober, strategic and discerning. Sees all options and judges accurately.	Can lack drive and the ability to inspire others.
Teamworker: co-operative, mild, perceptive and diplomatic. Listens, builds, averts friction and conflict.	Can be indecisive in a crunch situation.
Implementer: disciplined, reliable, conservative and efficient. Turns ideas into practical actions.	Can be somewhat inflexible and slow to respond to new possibilities.
Completer/finisher: painstaking, conscientious. Searches out errors and omissions. Delivers on time.	Can be inclined to worry unduly and reluctant to **delegate**.
Specialist: single-minded, self-starting, dedicated. Provides knowledge and skills in rare supply.	May contribute only on a narrow front and could dwell on technicalities.

Table 7: Belbin's strengths and weaknesses

A method of determining the suitability of an individual for a project role is provided by the **Belbin Team Role Inventory (BTRI)**. It a great tool for the project leader to slot the right individuals into designated project roles. This can be a challenging task considering the project leader might have to choose from many suitable people for certain roles.

How does the BTRI work? Project team members will fill in the **Belbin Team Inventory Questionnaire**. The results are used to establish the Belbin profile for each team member. The two dominant scores correspond to the two Belbin roles that individuals can perform within the current project team. The project leader also develops a team profile; this can be used for comparison or benchmarking with other project teams.

The BTRI is a valuable tool with regard to team building as it:

- Increases **self-awareness** of the project leader and the team members.
- Identifies the individual project team member's potential to take on different roles.
- Highlights imbalances within a team, if there are too many individuals with the same personality pattern in the team.

The following other teamwork theories are also helpful to assist project leaders in the process of developing and dealing with project teams and their respective project members:

Myers-Briggs Type Indicator

Myers-Briggs Type Indicator Theory (MBTI) – is a personality test that makes clear how people perceive the world. This is good for teamwork because it can help the team understand each other better.

Myers-Briggs suggests a special method involving defined questions in four areas to establish the individual personality type.

To determine your four-letter Myers-Briggs personality type you work through the paired questions in the four areas below. For each paired question, choose the side that seems more natural to you, even if you don't agree with every description, and mark the letter that goes with the questions you choose.

Are you outwardly or inwardly focused?	
You could be described as talkative or outgoing.	You could be described as reserved or private.
you like to be in fast-paced environments.	you prefer a slower pace with time for contemplation.
You tend to work out ideas with others and think out loud.	You tend to think things through inside your head
You enjoy being the centre of attention.	You would rather observe than be the centre of attention.
Then you prefer E – extraversion	**Then you prefer I – introversion**
How do you prefer to take in information?	
You focus on the reality of how things are.	You imagine the possibilities of how things could be.
You pay attention to concrete facts and details.	You notice the big picture and see how everything connects.
You prefer ideas that have practical applications.	You enjoy ideas and concepts for their own sake.
You like to describe things in a specific, literal way.	You like to describe things in a figurative, poetic way.
Then you prefer S – sensing	**Then you prefer N – intuition**
How do you prefer to make decisions?	
You make decisions in an impersonal way, using logical reasoning.	Yuo base your decisions on personal values and how your actions affect others.
You value justice and fairness.	You value harmony and forgiveness.
You enjoy finding flaws in an argument.	You like to please others and point out the best in people.
You could be described as reasonable and level-headed.	You could be described as warm and empathetic.
Then you prefer T – thinking	**Then you prefer F – feeling**

How do you prefer to live your outer life?	
You prefer for matters to be settled.	You prefer to leave your options open.
You think rules and deadlines should be respected.	You see rules and deadlines as flexible.
You prefer detailed, step-by-step instructions.	You like to improvise and make things us as you go.
You make plans, want to know what you're getting into.	You are spontaneous, enjoy surprises and new situations.
Then you prefer J – judging	**Then you prefer P – perceiving**

Table 8: Myers-Briggs personality areas

Based on the above questionnaire, you put together the four resulting letters, which determine your personality type.

Descriptions of the respective personality type are summarised in the table below.

ISTJ Responsible, sincere, analytical, reserved, realistic, systematic. Hardworking and trustworthy with sound practical judgement.	ISFJ Warm, considerate, gentle, responsible, pragmatic, thorough. Devoted caretakers who enjoy being helpful to others.	INFJ Idealistic, organised, Insightful, dependable, compassionate, gentle. Seek harmony and co-operation, enjoy intellectual stimulation.	INTJ Innovative, independent, strategic, logical, reserved, insightful. Driven by their own original ideas to achieve improvements.
ISTP Action-oriented, logic, analytical, spontaneous, reserved, independent. Enjoys adventure, skilled at understanding how mechanical things work.	ISFP Gentle, sensitive, nurturing, helpful, flexible, realistic. Seek to create a personal environment that is both beautiful and practical.	INFP Sensitive, creative, idealistic, perceptive, caring, loyal. Value inner harmony and personal growth, focus on dreams and possibilities.	INTP Intellectual, logical, precise, reserved, flexible, imaginative. Original thinkers who enjoy speculation and creative problem solving.
ESTP Outgoing, realistic, action-oriented, curious, versatile, spontaneous. pragmatic problem solvers and skilfull negotiators.	ESFP Playful, enthusiastic, friendly, spontaneous, tactful, flexible. Have strong common sense, enjoy helping people in tangible ways.	ENFP Enthusiastic, creative, spontaneous, optimistic, supportive, playful. Value inspiration, enjoy starting new projects, see potential in others.	ENTP Inventive, enthusiastic, strategic, enterprising, inquisitive, versatile. Enjoy new ideas and challenges, value inspiration.
ESTJ Efficient, outgoing analytical, systematic, dependable, realistic. Like to run the show and get things done in an orderly fashion.	ESFJ Friendly, outgoing, reliable, conscientious, organised, practical. Seeks to be helpful and please others, enjoys being active and productive.	ENFJ Caring, enthusiastic, idealistic, organised, diplomatic, responsible. Skilled communicators who value connection with people.	ENTJ Strategic, logical, efficient, outgoing, ambitious, independent. Effective organisers of people and long-range planners.

Figure 12: Myers-Briggs personality test

OVER TO YOU

Activity 13: Find your personality type

Using the Myers-Briggs model above, what is your personality type?

Adair's leadership theory

John Adair's leadership theory is represented by a "three circles" diagram, which illustrates the three core management responsibilities: achieving the task, managing the team and managing individuals.

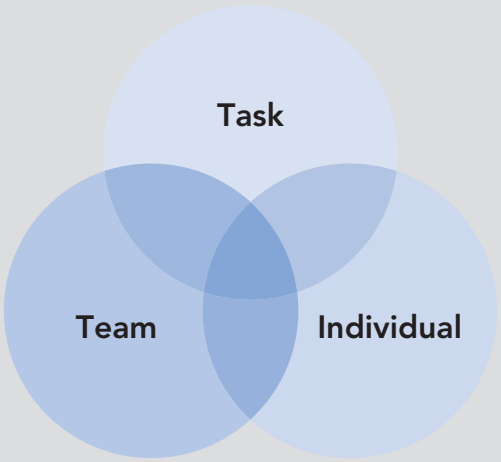


Figure 13: John Adair's leadership theory

Colour theory

Carl Jung's colour theory is about how colour is a determinant of human behaviour. By understanding this, you can better understand why people in your team do what they do.

Figure 14: Carl Jung's colour theory

Maslow's theory

The **Hierarchy of Needs theory** by Abraham Maslow is based on a pyramid of human motivation. The bottom starts off with physiological needs, like food. The next section is Safety, like the security of health. The third section is Love/belonging and an example would be family. The fourth is Esteem, meaning something like respect by others. The final section is Self-actualisation and the fulfillment of a purpose. The more advanced someone is in this hierarchy and the more basic needs that person has satisfied, the more they are able to participate in a goal towards a higher purpose.

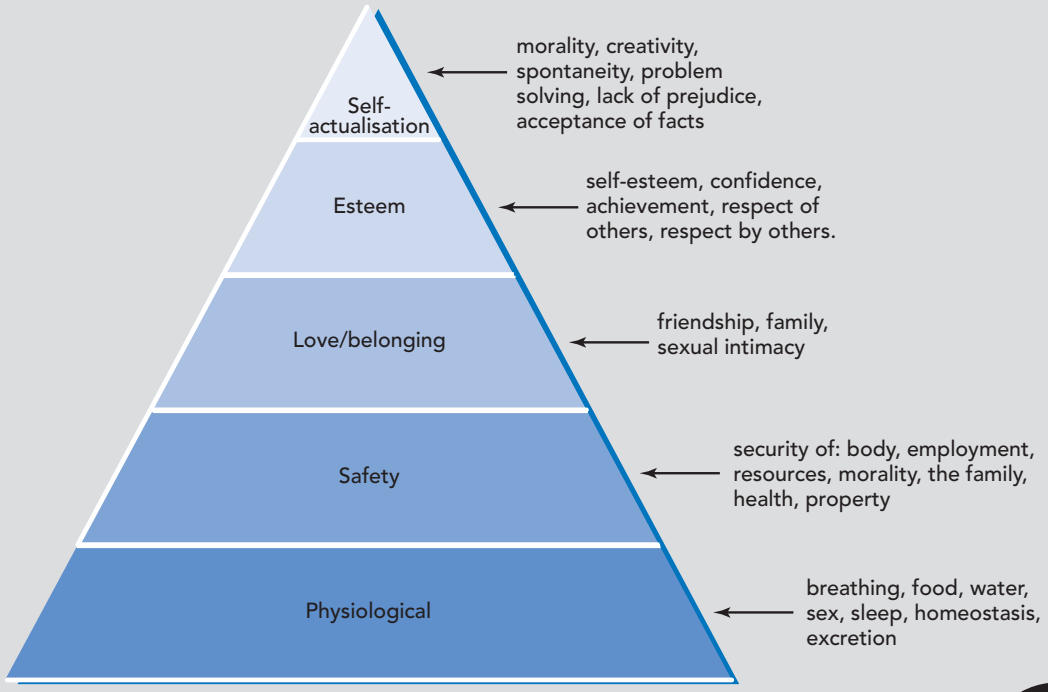


Figure 15: Abraham Maslow's hierarchy of needs

Tajfel's theory on Social Identity proposes that a person's sense of who they are depends on the groups to which they belong; this affects behaviour within a group.

The following case study outlines how important individual roles are in a group, and how a successful leader keeps a team together.

OVER TO YOU

Activity 14: Teamwork theories

Compare and contrast the teamwork theories identified in this section.
Elaborate on Tajfel's theory on social identity using a real-life example.

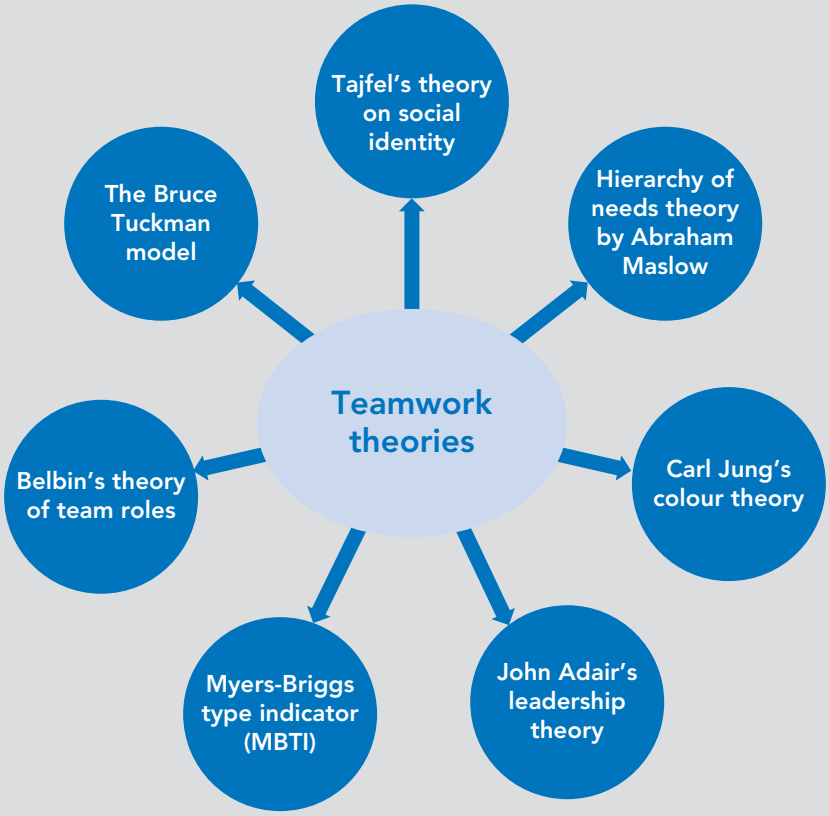


Figure 16: Teamwork theories

The key success factors for project team performance

A project within a business or organisation is obviously not self-serving. To justify its existence, it needs to meet expectations and to be considered as "successful".

A project is successful when it:

- delivers the outcomes and benefits required by the organisation, its delivery partners and other stakeholder organisations;
- creates and implements deliverables that meet agreed requirements;
- meets time targets;
- stays within financial budgets;
- involves all the right people;
- makes best use of resources in the organisation and elsewhere;
- takes account of changes in the way the organisation operates;
- manages any risks that could jeopardise success;
- considers the needs of staff and other stakeholders.

For the project team to be able to achieve the expected outcome, the following external and internal project requirements should be fulfilled and maintained over the duration of the project.

- The goals of the project are aligned with the business strategy and clearly communicated to the team.
- The senior management of the organisation fully supports the project.
- The project performance is measured against clearly defined and agreed-upon project scope, budget and schedule.
- Adequate resources are made available throughout the project.
- Team members have complementing skills and talents and are fully committed to the project.
- The organisation and project leader actively encourage and work in a project environment where people can communicate respectfully, openly and honestly.
- The project leader evaluates each individual's strengths and weaknesses and ability to contribute to the different tasks and allocates team roles accordingly.
- Team members participate in the decision-making process.
- The project leader has update meetings with team members on a regular and irregular basis; the latter if required due to change of circumstances.
- The project leader has leadership qualities, knowledge and abilities.

OVER TO YOU

Activity 15: Danger factors

List the factors that could jeopardise a project and how the project manager can address them.

Leading and managing virtual project teams

A **virtual team** usually refers to a group of individuals who work together from different geographic locations, and rely on communication technology to collaborate.

Virtual teams are now a reality in the workplace. A key benefit to forming virtual teams is the possibility for cost-effectively tapping into a pool of talent and skills from various locations within or external to organisation. This means that the company has access to special skills and talents while saving on time for travel, office space or relocation.

> *"We are part of a global company with operations in 100 countries and over 500 locations. We wanted to capitalise on talent within our organisation and we made a commitment to use technology and e-business practices to do so"*
>
> *Dr. Don Ledbetter, Director of HR at L-3 Communications*

In project management reality this means that the project team members are potentially located in different parts of the world while working on a project, collaborating with each other via their computers and the internet. They are either working from an office or home office, but are not expected to travel to come together physically as a team on a regular day-to-day basis.

This raises the following questions:

- What are the differences and similarities of project teams vs. virtual project teams?
- What are the special requirements regarding a virtual project team and team members?
- What are the challenges with regard to managing virtual project teams?

Traditional project teams and virtual project teams are the same with regard to the goals, team building and leadership methodology. Saying that, there are some fundamental differences and challenges with regard to communication, management and sharing of work tasks. The virtual project team environment poses special requirements for the project leader and the team members.

The case study below shows how virtual reality influences businesses in today's world.

CASE STUDY: NIC HARRY

Customer case study, Nic Harry Bamboo Socks, Interview with Nic Harry

Nic Haralambous launched his online sock business in six weeks for 5,000 ZAR and went on to sell 800 pairs in ten days. One of the secrets to his success was using the internet to access the whole world from his bedroom. Another was that he chose a product that was lightweight and easy to ship.

To keep costs down, Nic designs all his socks himself and they are made by a local supplier tagging onto the international brand of Cape Town.

His mission was to prove that a successful business can get started on a "shoe string" budget and in a short period of time – thanks to the virtual tools we have access to!

Source: Adapted from http://www.702.co.za/articles/13398/i-started-my-wildly-successful-business-with-r5000-and-immediately-turned-a-profit

For a start, it is important that the virtual project team environment is set up properly to achieve a high level of performance from the team members and the team.

The virtual project team **environment** needs:

- to grant access to technology infrastructure, to knowledge gathering and access to communication and **collaboration tools** for all team members;
- to provide access to all information necessary for team members, including working papers;
- to provide support and troubleshooting services;
- to define working time zones and languages;
- to have a set meeting schedule.

Virtual project team **members** need:

- to be **self-managing**, able to work on their own and possibly understand differences in culture;
- to be trained, so that they understand technology infrastructure and can use communication technology tools and conduct virtual meetings.

A virtual project team **leader** needs:

- to be comfortable relinquishing a certain level of control: as the project team is obviously not working from the same location, the team leader does not have the same control over the team or the individual members. He therefore has to give up certain levels of control and/or put certain feedback and reporting measures in place.
- to manage and set clear goals: team members are not able to freely come together or walk into an office, therefore it is important that the project purpose, strategic alignment and goals are clearly defined and communicated to the team members.
- to use **virtual collaboration tools**: due to the constraint of having to use virtual communication, it is important that the project manager chooses adequate tools to ensure project communication and success. This could be via video conferencing, conference calling, instant messaging, emailing or other communication and collaboration tools available on the market today.

- to effectively manage communication and **collaboration** and assess their effectiveness on a regular basis. The project leader must regularly check if team members participate efficiently, based on the chosen collaboration tools and if they are happy and motivated to do so. It is essential that the virtual team leader has the qualities needed to influence virtual team members to co-operate and work towards common goals.
- to keep team members focused, motivated and build trust. Any feeling of disconnection and isolation between project team members can negatively affect the project performance. Therefore, the project leader needs to look for ways to keep people motivated during the process; this might include virtual catch-up, feedback and review meetings via video. This ensures that the project leader picks up on the non-verbal communication clues, like facial expressions and body language, as well as straightforward verbal communication.
- to build cross-cultural bridges. The project leader must understand the cultural differences and backgrounds of the individual project members and communicate those to the team. He must encourage understanding, acceptance and respect.

OVER TO YOU

Activity 16: Virtual teams

What are the pros and cons of virtual teams?

How would you ensure successful virtual team working on the Nic Harry business project?

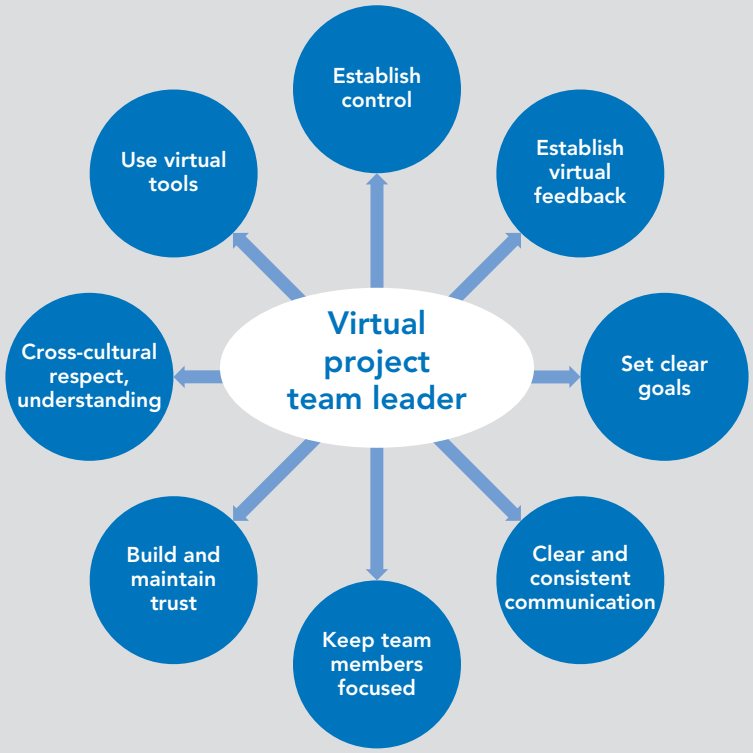


Figure 17: Virtual project team leaders' responsibilities

2.3 Evaluate the various methods of communication that could be used by an effective project manager

Communication is an essential part of project management; therefore, a good project leader needs to be a good communicator and have an excellent understanding of communication tools.

Methods and frequency of communication vary from project to project, mainly because of the varying complexities of a project and the parties involved. In simple projects, this can be as little as one person and a stakeholder; in complex projects it might be many (remote) team members and various stakeholders. Depending on the complexity and size of the project, communication requires little or a great deal of communication planning.

Communication methods

Communication methods can be grouped into the following categories:

- **Interactive communication**: two or more people interact with each other, for example, communication in meetings, conference calls and video conferences.
- **Push communication**: this refers to one-way streaming of information; sending information without the expectation of feedback from the recipient, for example, status reports, mass-mailers and project updates.

- **Pull communication**: the sender places information at a central location like a portal or share drive and the recipients are responsible for retrieving the information from there themselves.

Another way to group communication methods is as either **synchronous** or **asynchronous**.

Synchronous communication happens when people communicate in real time whether they are in the same place or in a different place (electronic communication), for example:

- live meetings: gatherings of team members at the same location;
- conference calls: a telephone call in which several people participate;
- audio conferences: a conference call conducted online using software such as Skype;
- computer-assisted conferences: an audio conference with a connection between computers that can display a document or spreadsheet that can be edited by both parties;
- video conferences: similar to an audio conference but with live video of the participants. Some laptop computers have built-in cameras to facilitate video conferencing;
- IM (instant messaging): exchange of text or voice messages using pop-up windows on the participants' computer screens;
- texting: exchange of text messages between mobile phones, pagers, or personal digital assistants (PDAs) – devices that hold a calendar, a contact list, a task list, and other support programmes.

A major factor to take into consideration in synchronous communication is the planning needed for different time zones.

Asynchronous communication refers to people communicating from a different place in a different time. This can happen via:

- mail and package delivery
- fax
- email
- project blog
- Really Simple Syndication (RSS)

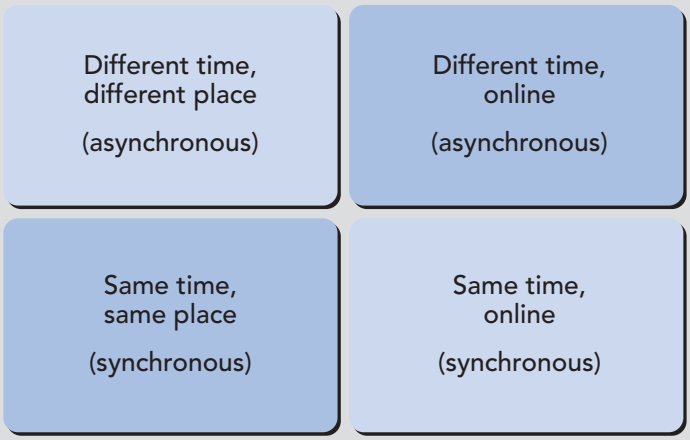


Figure 18: Synchronous vs. asynchronous communication

As physical meetings are not always possible or cost effective, in today's market place electronic communication like email, instant messaging and virtual conferencing has become more and more important. The advantage of electronic communication is speedy transmission, with wide coverage, including global exchange of feedback.

New technologies for electronic communication often come on the market in today's business world.

Examples of new technologies include online collaboration tools and applications like Trello, Evernote, MS OneNote and Slack. There are various project management software applications available, the most well-known being MS Project and MS Project Plan 365.

MS Project is a software management solution designed for all sizes of business. The interactive dashboard allows multiple tasks to be monitored and controlled; from accounting to scheduling. A useful feature includes the ability to plan the budget, receive input from project managers and have real-time costing of the project. This application contains several templates for various management tasks including reporting. The continual improvements are made available in updates, which now means that MS Project can support up to 30,000 projects with ease.

Table 9 gives an overview of MS Project structure.

Project Online					
	HR	**MARKETING**	**FINANCE**	**OPERATIONS**	**IT**
Project: up to 30,000 project sites	Site 1	Site 1	Site 1	Site 1	Site 1
	Site 2	Site 2	Site 2	Site 2	Site 2
	Site 3	Site 3	Site 3	Site 3	Site 3

Table 9: Example of MS Project structure

MS Project Plan 365 is the "little brother" of MS Project, featuring the following:

- compatible with MS Project allowing for back and forth collaboration;
- cloud-based integration to share information using Google Drive, OneDrive, Box, Dropbox, and SharePoint;
- collaboration ready, allowing for real-time updates;
- multi-language, allowing for global communication across languages and currencies;
- a powerful scheduling engine which can calculate critical paths, project end date, resource over or under allocations and labour/material costs;
- secure with no open source, however, it can run on or offline;
- trusted.

There are many other project management applications on the market. A few other popular examples are listed below:

Application	Top features
Asana	• Break work into tasks and assign. • Organise tasks into projects for road maps and timelines. • Review milestones and check on your team's progress. • Notified about projects' updates. • Uses project dashboards for quick overview.
BaseCamp	• Manage multiple users' work. • Message boards for discussing new projects. • In-app collaboration. • Reporting on project performance. • Separate dashboard for clients. • Email and desktop notifications.
SCORO	• Projects with sub-tasks and deadlines. • Real time KPI dashboard. • Shared team calendar and meeting scheduling. • Contact management. • Time tracking and billing. • Detailed reports on progress and finances. • Quoting and invoicing with pre-set templates.
PODIO	• Assign, attach files and discuss details within the solution. • Share encrypted and large files. • Automate sales pipelines. • Get overview of company with visual dashboards. • Automated workflows.
JIRA	• Create user stories and issues, plan sprints. • Distribute tasks across software team. • Centralise communication. • See real-time reporting.
TRELLO	• Simple task management. • Creating unlimited task lists. • Image and file sharing. • Organising lists by dates or priority. • Commenting and collaboration.

Table 10: A comparison of project management software

Using a new technology that is unfamiliar to the team increases the technology complexity, which can cause delays and increase costs. To decide if a new technology should be included in a communications plan, some questions you might want to ask are:

- Does the new **communication technology** provide a competitive advantage for the project by reducing cost, saving time, or preventing mistakes?
- Does the project team have the expertise to learn the new technology quickly?
- Does the company offer support such as a help desk and equipment service for new communication technology?
- What is the cost of training and implementation in terms of time as well as money?

The below case study features a great example of how a company improved the overall communication within the business with fantastic and far-reaching results.

CASE STUDY: COMMUNICATION

Communication is key: getting everyone in the loop

Many of today's companies are faced with these critical business information problems and are in search of the most effective, proven programmes in the marketplace that can be used to solve their growing communication issues.

Addressing the need

A few years ago, Misys Healthcare's (now part of Allscripts) Homecare business unit, a provider of healthcare information systems serving 600 providers of home healthcare, hospice, and private-duty services, installed SharePoint as a platform for improving communication between Allscripts and SoftServe, and between different departments within Allscripts' Homecare Product Development. Because Allscripts Health System Group designs, installs, and supports software for the automatic billing, scheduling, and clinical functions of its healthcare clients in the US, it is imperative that their clients, agency directors, finance directors, management information officers, and private duty organisations receive accurate, up-to-date information for their business needs.

Realising the benefits

SharePoint has provided Allscripts Homecare with a single collaboration solution for managing day-to-day operations around product releases, customer beta programmes, vendor partnerships, new feature designs, internal and external training, cross-department operation of new products, regulatory compliance, strategic product road maps, prioritisation of enhancement requests and defect repair items, and much more. SharePoint also has a section for frequently asked questions. Here employees can find information on a product, feature, or integration point. Employees always have the opportunity to find the information in the question-and-answer section of SharePoint.

Another important element in SharePoint is process publishing, allowing Allscripts Homecare to publish its processes on how it runs its business. For example, any employee can visit this section and get information on questions about proper processes for handling a defect or steps that should be taken when dealing with an unhappy customer. The answers are right there, and all that the employee must do is follow the designated steps.

Allscripts Homecare soon realised additional benefits for communication, organisation, and productivity by publishing information from all areas within the company and integrating real-time automated updates from SoftServe. This has resulted in SoftServe updating some of Allscripts Homecare's secure portals because the company has the most current information about when products will be introduced or when defects will be corrected. SoftServe therefore updates dates and product statuses, freeing Allscripts Homecare from this responsibility.

A success story

SharePoint has improved communication between Allscripts Homecare and SoftServe as well as between different departments within the company. SharePoint has also improved productivity through continuity of business information, which is of significant value to both companies. SharePoint has enhanced Allscripts Homecare's relationship with SoftServe by eliminating redundant tasks, emails, and questions between the two companies. Now both companies know where to find the vital information they need when they need it.

Everyone is on the same team and collaboration takes place between the two companies according to what the market requires.

Source: Adapted from https://www.projectsmart.co.uk/communication-is-key-getting-everyone-in-the-loop.php

OVER TO YOU

Activity 17: Communication tools

Draw up a table of your favourite online communication tools and how they would be beneficial to a project team.

There are various modes of communication to choose from, the most important ones being:

Mode of Communication	Pros	Cons
Formal meeting	Focused, interactive, group	Scheduling delays with stakeholders, discoverable information
Informal meeting	Quick, interactive	Unpredictable, individual
Report	Detailed message, group	No immediate feedback
Email	Quick, focused, group	Unfocused response, discoverable information
Phone call	Focused, interactive	Unpredictable connection, individual
Conference call	Consistent message, group	Uncertain coverage
Voice mail	Quick, focused	Limited content, individual
Webx	Focused, interactive, distributed group	Technology
Face-to-face communication	Focused, interactive	Scheduling delays, unpredictable
Electronic communication	Quick, group	Unfocused response, discoverable information
Online collaboration	Quick, group	Scheduling delays, connectivity, discoverable information
Project management tools	Interactive, group	Cost, technology, connectivity

Table 11: Modes of communication

In the project planning phase, the project manager sets out a communication plan including an assessment of the required and available communication technology based on a team list and the tasks to be achieved. He will also set out the communication methods and frequency to be used within the project.

The communication technology assessment defines the type of communication technology used by the project leader. This will vary based upon the organisational constraints of the project team and stakeholders.

Factors that **influence the communication technology** in a project include:

- is the team a virtual team or not?
- the confidentiality of any information that needs to be shared;
- communication technology and facilities available to the team members;
- education and level of training of team members;
- the organisation's culture for how meetings and discussions are normally conducted.

The project leader collates a **project team list**, which is a database with all project team members and their contact information. This includes information of the core project team and extended members and their functions in the project. The list is distributed to all stakeholders and persons involved with the project.

The project communication plan also sets out the **types and methods of communication** during a project, including frequency, attendees and topics. It also has minutes of the respective meetings attached when available.

The project communication plan covers **management meetings**, which are the project team's meetings with the stakeholders. In the planning phase, these meetings will be more for information from the stakeholders for the project team, including alignment with company strategy, project goals, timelines, resources and so on. During the project, the information flow will be the other way around, including progress and milestone reports from the team to the stakeholders.

An important part of the communication plan refers to the **scheduling of team meetings**. Depending upon the size of the project and the team, these can be short ad hoc conversations, conference call updates, email or Skype chats, formal meetings, or a variety of other communication approaches. Regardless, these are how the project manager can track the day-to-day work of the project and resolve issues while they are still small.

Another part of the communication plan can refer to the **management reports** for the organisational management team and stakeholders. The purpose is to provide information on the status of the project, milestone achievements, potential delays or resource shortages and so on.

The **project records** are for future reference, to be used for learning, benchmarking and historical purposes. The structure of project records could, for example, look like this.

Management	**Meetings**				
Meeting	Communication method	Topics	Attendees	Presenter	Notes/Comments
Team	**Meetings**				
Meeting	Communication method	Topics	Attendees	Presenter	Notes/Comments

Programme	Report				
Report	Communication method	Topic	Distribution	Responsible	Notes
Records	**Review**				
Programme record	Communication method	Topic	Review team	Responsible	Notes

Table 12: Example of project records

OVER TO YOU

Activity 18: The communication plan

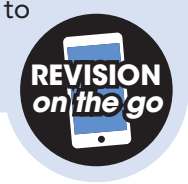
Using the above table, prepare your own communication plan for your project.

2.4 Critically evaluate principles of knowledge management and organisational learning in projects

> *"Success in management requires learning as fast as the world is changing."*
>
> *Warren G Bennis*

NEED TO KNOW

Successful **project completion** is not only a time for celebration, but also for retrospection and learning. What was good? What could have been improved? What can we learn? These are questions which need to be asked with the aim of delivering constructive feedback to the team and individual team members. The project leader should also give individual team members the opportunity to provide their honest feedback.



A good project leader will fill out something like a **"Project lessons-learned checklist"** and rate the impact of the deliverables on the overall project performance. The project leader will also write a project review report evaluating the project and the performance of the team and the individual members.

Project lessons-learned checklist

No.	Lesson learned	Y	N	N/A	Low impact – high impact
	Project planning				
1	Business objectives were specific, measurable, attainable, results-focused				1 2 3 4 5
2	Product concept was appropriate to business objectives				1 2 3 4 5
3	**Project plan** and schedule were well documented				1 2 3 4 5
4	Project schedule encompassed all aspects of the project				1 2 3 4 5
5	Tasks were defined adequately				1 2 3 4 5
6	Stakeholders had appropriate input into the project				1 2 3 4 5
7	Requirements were gathered in sufficient detail				1 2 3 4 5
8	Requirements were documented clearly				1 2 3 4 5
9	Specifications were clear and well-documented				1 2 3 4 5
10	Test plan was adequate, understandable and well documented				1 2 3 4 5
11	External dependencies were documented, agreements signed				1 2 3 4 5

No.	Lesson learned	Y	N	N/A	Low impact – high impact
12	Project budget was well defined				1 2 3 4 5
13	End of phase criteria were well documented for all project phases				1 2 3 4 5
14	Project plan had buy-in from the stakeholders				1 2 3 4 5
15	Stakeholders had easy access to Project plan and schedule				1 2 3 4 5
	Project execution				
16	Project stuck to original goals				1 2 3 4 5
17	Changes were of manageable frequency and magnitude				1 2 3 4 5
18	Project baselines were well managed				1 2 3 4 5

Table 13: Example of a project lessons-learned checklist

This whole process is essential for collecting information, which will provide useful knowledge for business management, stakeholders, relevant personnel and for project managers of future projects. They don't have to reinvent the wheel or make the same mistakes, but can draw from the previous experiences of other project teams.

In today's competitive and fast business environment, organisations must strive for collection and management of knowledge to be able to adapt quickly and secure their place in the market.

> *"Knowledge management is about making the right knowledge available to the right people. It is about making sure that an organisation can learn, and that it will be able to retrieve and use its knowledge assets in current applications as they are needed"*
>
> *Wikipedia*

Peter Senge, the founder of the Society of Organisational Learning, created the term "the learning organisation". Learning organisations in his view are:

> *"organisations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together."*

According to Senge, the learning organisation depends on the mastery of the five dimensions:

- **Systems thinking**: the notion of treating the organisation as a complex system composed of smaller (often complex) systems. This requires an understanding of the whole, as well as the components, not unlike the way a doctor understands the human body.
- **Personal mastery**: Senge describes this as a process where an individual strives to enhance their vision and focus their energy, and to be in a constant state of learning.
- **Mental models**: "Deeply ingrained assumptions, generalisations, or even pictures and images that influence how we understand the world and how we take action" (Senge 1990). These should be recognised and challenged to allow for new ideas and changes.
- **Building shared vision**: shared vision is a powerful motivator. A leader's vision is not necessarily shared by those below them. The key here is to pass on a picture of the future, to influence others using dialogue, commitment and enthusiasm, rather than trying to dictate. Storytelling is one possible tool that can be used here.
- **Team learning**: the state where team members think together to achieve common goals. It builds on shared vision, adding the element of collaboration.

Senge stated the importance of the role of the leader in a learning organisation, which he defined as follows:

- The leader as **designer**: creating common vision, determining policies, strategies and structures and creating effective learning processes.
- The leader as **teacher**: a coach who works with the mental models present in the organisation.
- The leader as **steward**: refers to the attitude of the leader as part of something greater.

OVER TO YOU

Activity 19: Lessons-learned checklist

Complete the checklist above. What elements would you add to your project lessons-learned checklist for your field?

Designer. Teacher. Steward. Evaluate and explain what type of project leader you would be.

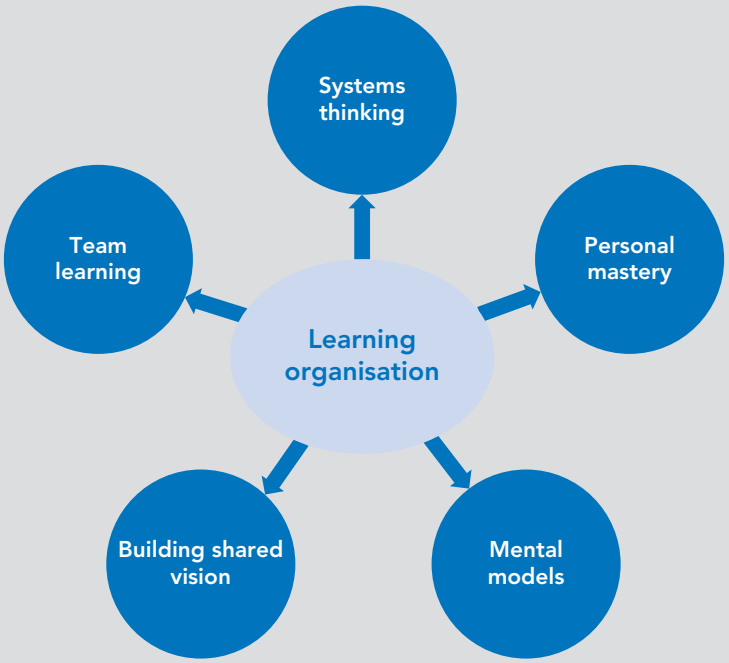


Figure 19: Elements of a learning organisation

READING LIST

Paul Ziek, J. Dwight Anderson, (2015) "Communication, dialogue and project management", *International Journal of Managing Projects in Business*, Vol. 8 Issue: 4, pp. 788–803. (This article will be available in your online student resources.)

Paul Ziek, Stacy Smulowitz, (2014) "The impact of emergent virtual leadership competencies on team effectiveness", *Leadership & Organization Development Journal*, Vol. 35 Issue: 2, pp. 106–120. (This article will be available in your online student resources.)

Prudence A. Clarke, (2009) "Leadership, beyond project management", *Industrial and Commercial Training*, Vol. 41 Issue: 4, pp. 187–194. (This article will be available in your online student resources.)

John Edmonds, (2010) "How training in project management can help businesses to get back on track", *Industrial and Commercial Training*, Vol. 42 Issue: 6, pp. 314–318. (This article will be available in your online student resources.)

Summary

Communication, leadership and learning are key components for the success of programs and projects. Therefore, it is essential that businesses encourage and actively support their employees' development of required and necessary skills and capabilities, for them to be able to contribute to successful product implementation.

Chapter 3

Project Planning and Benefits Realisation

Introduction

A programme or project has to match the business strategy and support the achievement of the business goals. In addition, successful implementation has to be carefully outlined, planned and monitored. The project manager has an important role and plays a central part in achieving the above. This chapter outlines the major tasks and responsibilities.

Learning outcome

On completing this chapter, you will be able to:

3 Critically discuss the strategic responsibilities of a programme/project manager

Assessment criteria

3 Critically discuss the strategic responsibilities of a programme/project manager

3.1 Develop an appropriate business case for a project

3.2 Discuss considerations in the management of resources and budgets

3.3 Evaluate approaches for the identification and management of project/programme risks

3.4 Discuss approaches to monitoring project/programme delivery against milestones

3.5. Critically discuss the meaning and importance of benefits realisation

3.1 Develop an appropriate business case for a project

Roles and responsibilities within typical project and programme structures

> *"The P in PM is as much about "people" management as it is about "project" management."*
>
> *Cornelius Fichtner*

Programmes and projects in general have a certain structure outlining the roles and determining who is involved and who is responsible for what.

As we have seen in chapter one, a programme is linked to the overall vision and strategy of an organisation. The programme usually drives a longer-term purpose with various underlying projects working on different outputs serving that purpose.

Directing a portfolio of projects is a key senior management task, as a programme is a group of projects that will take the organisation from where you are now to where you want to go.

Therefore, there are certain similarities in the structure of a programme and project, but also certain differences. A project usually comprises of the following:

The project originator

- The **project originator** identifies a need for a project; he or she can come from any function or level in the organisation or even from outside the organisation.

The project sponsor

The project sponsor is usually a member of senior management and:

- Champions the cause of the project throughout its duration.
- Ensures that there is a real need addressed by the project.
- Is accountable for realising the benefits of the project for the organisation.

The project (or programme) board

- A project or programme board is usually required for projects that effect various organisational functions or processes.
- This can also be the programme board if there are various projects aligned for one purpose.

The project manager or leader

- Runs the day-to-day project management involving the project team across all necessary functions.

The project administrator

- Depending on the size of the project, the project manager is supported by a project administrator or a support team.
- Takes on administration roles like project monitoring, planning, filing, and control.

The team members

- These are the people who work on the project.
- They report to the project manager.
- They are accountable for the subscribed work and deliverables.
- Depending on the size of the project, there may be several sub-teams with individual team managers reporting to the project manager.
- There can be a full time (core) team and a part-time team.

A project coach

- The person who supports the project manager, sponsor or board with coaching or facilitation, if needed.

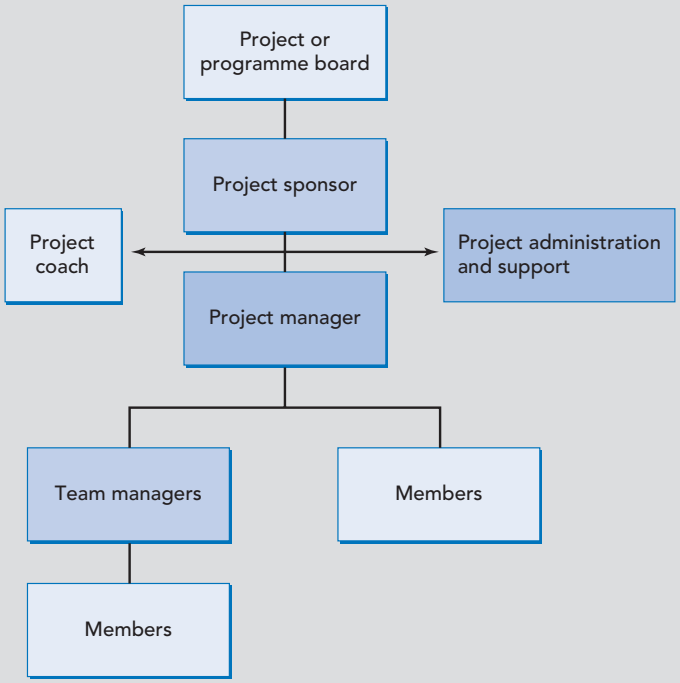


Figure 1: Example of team members

The case study below highlights how systemised planning will help achieve better results in different areas.

CASE STUDY: PLANNING THE PROJECT

How planning helps surgeons and project manager

Surgeon and author Atul Gawande did a study at the Harvard Medical School dealing with a "checklist" for surgery success.

"Our great struggle in medicine these days is not just with ignorance and uncertainty," Gawande says. "It's also with complexity: how much you have to make sure you have in your head and think about. There are a thousand ways things can go wrong."

Because doctors are human (just like everyone else), they sometimes miss things. So Gawande looked at other fields that deal with complex circumstances and visited, among others, Boeing to see how they make things work. He cites the "pilot's checklist" as a good example of how other complex tasks are completed outside medicine.

Unlike a pilot, there is no checklist in surgery, just the surgeon's experience and intuition that dictates how a procedure is performed. So as an experiment, he brought a two-minute checklist into the operating room of eight hospitals – after having worked with a team of people that included Boeing to show them how to put the checklist together.

How did it work?

"We get better results," says Gawande. "Massively better results."

"We caught basic mistakes and some of the stupid stuff," Gawande reports. "We also found that good teamwork required certain things that we missed very frequently."

Something as simple as making sure that everyone in the operating room knew each other by name turned out to be incredibly valuable. Isn't it interesting how similar some of these issues sound to the work management issues project teams face every day?

Like surgery, capturing best practices and formalising processes are critical for success. Like the surgeon's checklist, the right project management tools can help. Fortunately, there is a lot we can learn from Dr. Gawande's study. As well as what a heart surgeon could learn from a project manager.

Source: Adapted from www.projectsmart.co.uk/what-a-heart-surgeon-could-learn-from-a-project-manager.php

OVER TO YOU

Activity 1: Project planning

Use your chosen blue-chip company from Chapter 1 and plot a project plan. What would your programme hierarchy look like for them? Draw and explain.

Figure 2: Project structure

The business case

> *It's all about selling them a business case to make the changes.*
>
> Bill Shaw

NEED TO KNOW

A **project business case** outlines the benefits of a project, and justifies the money and effort required to implement it and carry it through. It is usually developed in the pre-planning phase of a project and outlines the why, what, how and who is necessary.

The **purpose** is to communicate to the decision-makers the value and benefits of the project, to gain approval for the project and secure resources and funds for the investment required. Decision-makers could be the programme or business management board or the business owners.

In summary:

- A business case is used to obtain management commitment and approval for investments in a project and programme, through rationale for the investment.
- The business case provides a framework for planning and management of the project.
- The ongoing viability of a project or programme will be monitored against the business case.

The business case brings together all the various components that impact the decision about a project. For example, it assesses the:

- problem or business opportunity;
- costs, benefits and risks of the project;
- project's alignment with the business strategy;
- required investment for resources and running the project;
- timescale;
- capability of the organisation to run the project including the support from stakeholders;
- external requirements;
- internal and external impact;
- critical success factors;
- key inter-dependencies;
- options available and recommendations.

It is usually prepared by the project sponsor potentially including the future project manager. The preparation will take into consideration and involve all managers whose divisions, functions or departments will be impacted by the project or who will be asked to allocate resources to the project. Ideally, anybody involved in creating the business case will have a thorough understanding of the circumstances and requirements of the business and its external factors.

Today's business environment is fast paced and decision makers are often overloaded with information. Therefore, it is essential to ensure that the business case is brief, clear, concise, interesting and focuses on the key elements necessary necessary for inclusion.

The key aspects to be covered in the business case are strategic fit, options appraisal, commercial validity, affordability and achievability:

Strategic fit

- A description of the business need and its contribution to the organisation's business strategy.

Objectives

- Why it is needed now.
- The key benefits to be realised.
- Critical success factors and how they will be measured.

Options appraisal

- Cost/benefit analysis of various options.
- Analysis of soft benefits that cannot be quantified in financial terms.
- Identification of preferred options and any trade-offs.

Commercial aspects (where applicable)

- Proposed sourcing option including reasons for its selection.
- Key features of proposed commercial arrangements (e.g. contract terms, contract length, payment mechanisms and performance incentives).
- The procurement approach/strategy with supporting rationale.

Affordability

- Statement of available funding and estimated cost of project.
- Identification of departmental costs (where applicable).

Achievability

- High-level plan for achieving the desired outcome, with key milestones and major dependencies (e.g. interface with other projects).
- Contingency plans.
- Major risks identified and outline plan for addressing them.
- Provider's plans including required skills and experience levels.

Source information (if applicable)

- Procurement documentation.
- Programme/project management plans and documentation.
- High-level requirements.
- Business strategy.

In practice, you can use the following business case template to put together a well-structured business case including the required relevant content.

Business case template		
1	**Strategic fit**	**To include**
1.1	Business need	Describe the business need the project will meet
1.2	Organisational overview	Describe the organisation's business strategy, vision, structure, main aims, key responsibilities
1.3	Contribution to key objectives	Describe how the project will contribute to key objectives
1.4	Stakeholders	Outline main stakeholder groups and their contribution to the project, examine conflict potential
1.5	Existing arrangements	Outline current service delivery agreements, major contracts with service providers, in-house function, technical standards
1.6	Scope	Summarise the potential project scope and explain options
1.7	Constraints	Summarise main constraints, for example, willingness to change
1.8	Dependencies	Outline internal and external factors upon which the successful delivery of this project depends
1.9	Strategic benefits	Outline strategic and operational benefits for the organisation, show how they are linked to the key objectives
1.10	Strategic risks	Outline the main business, service, strategic and external risks
1.11	Critical success factors	Define the critical success factors for the project

2	Options appraisal	
2.1	List of options	Outline options identified for analysis, possibly subject to SWOT analysis
2.2	Opportunities for innovation or collaboration	Describe the opportunities for innovative approaches such as a new way of providing a particular service or exploiting new ways of saving running costs on buildings. Outline requirements and opportunities for collaborations with others
2.3	Service delivery options	Investigate options ranging from in-house delivery to degrees of partnership with private sector and others
2.4	Implementation options	Examine options for the pace at which the project could be implemented, in terms of time scale and change required
2.5	Detailed option appraisal	Explain the general approach with regard to calculating cost and benefits, including **intangible** benefits
2.6	Risk quantification	Identify and quantify each risk based on risk analysis (Chapter 3.3)
2.7	Benefits appraisal	Identify key benefits based on benefit management plan (Chapter 3.4)
2.8	Preferred options	Show findings from economic appraisals, benefits evaluation and others
3	**Commercial aspects**	
3.1	Output based specification	Summarise the requirements in terms of outcomes and outputs
3.2	Sourcing options	Outline source options for services to meet the business need, for example, partnerships, framework, existing supplier arrangements, with suggestions for selecting preferred sourcing option.
3.3	Payment mechanisms	Explain proposed payment mechanisms that will be negotiated with the providers
3.4	Risk allocation and transfer	Summarise the assessment of how the types of risk might be apportioned or shared
3.5	Contract length	Outline scenarios for contract length (with rationale) and proposed key contractual clauses.
3.7	Implementation timescale	Provide a high-level view of implementation timescales

4	Affordability	
4.1	Budget based on whole life costs	Produce estimates of the whole-life costs of the project including details of: • the expected costs • when they will occur • how they will be monitored • who will pay for each cost • any risk allowance that may be needed (in the event of things going wrong)
4.2	Income and expenditure account	Produce a list of all income and expenditure
4.3	Balance sheet	Produce a list of all assets and liabilities
4.4	Cash-flow	Produce a list of all ingoing and outgoing cash movements
5	**Achievability**	
5.1	Evidence of similar projects	Provide evidence of similar projects that have been successful, to support the recommended project approach (or use external information)
5.2	Project roles	Identify key roles: • who will be responsible for making the investment decision (typically a management group rather than an individual) • the project sponsor as the named individual who will be personally accountable for the success of the project • the project manager • the main stakeholders • key members of the project board, where applicable or other essential roles as required.
5.3	Procurement strategy	Set out indicative timetable and justification for the proposed approach.
5.4	Project plan	List the main phases of the project plan
5.5	Contract management	Summarise arrangements for contract management
5.6	Risk management	Outline risk management arrangements
5.7	Benefits realisation plan	Outline the benefits realisation plan
5.8	Contingency plan	Outline contingency arrangements

Table 1: Business case template

In reviewing your business case you might want to ask the following questions:

- Is the business need clearly stated?
- Have the benefits been clearly identified?
- Are the reason for and benefits of the project consistent with the organisation's strategy?
- Is it clear what will be defined as a successful outcome?
- Is it clear what the preferred option is?
- Is it clear why this is the preferred option?
- Where there is an external procurement is it clear what the sourcing option is?
- Is it clear why this is the preferred sourcing option?
- Is it clear how the necessary funding will be put in place?
- Is it clear how the benefits will be realised?
- Are the risks faced by the project explicitly stated?
- Are the plans for addressing those risks explicitly stated?

OVER TO YOU

Activity 2: Using the business case template

Develop a business case for your chosen project, based on the business case template in Table 1 (without the income/expenditure, balance sheet and cash-flow calculations).

Figure 3: Requirements for the business case

3.2 Discuss considerations in the management of resources and budgets

Identifying and planning of resources

Projects require resources such as time, people, equipment, premises and funds. Therefore, resource management comprises of the planning, scheduling, allocation, acquisition and deployment of the internal and external resources required to deliver the project or programme.

The case study below highlights how the right decisions and aligned resource allocation can make all the difference with regard to business growth and success.

CASE STUDY: NUCOR

Why Nucor Steel took a company sized gamble

Nucor is one of the largest steel manufacturers in the United States.

It built its pioneer steel plant with the up-to-the-minute technology in 1989 when CEO Kenneth Iverson made the decision to adopt an expensive new steel casting technology. This technology allowed Nucor to gain significant advantage over their competitors and reduce production costs in the long run.

The company had to make a huge financial investment, however, and the technology was unproven at that stage making it a risky route to take. But, operations expertise has limits and new investment sets the bar.

Source: Adapted from http://www.businessinsider.com/most-important-business-case-studies-2012-10#why-nucor-steel-took-a-company-sized-gamble-15

These are the main resource categories you should take into consideration when looking at planning your resources and the cost attached to them.

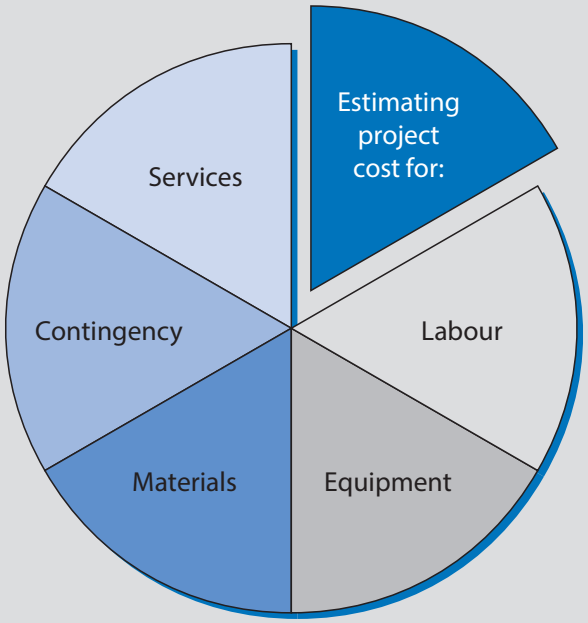


Figure 4: Estimating project costs

The resource management plan

In line with the preparation of the business case, the responsible planning person creates and co-ordinates the preparation of the resource management plan.

- The resource management plan includes:
- the type of resources required;
- a calculation of when the resources will be required during the project (scheduling);
- where the resources come from (internal or external suppliers);
- the cost of the resources (which will be included in the budget as well);
- the risks involved, for example, a potential shortage of people;
- support documents such as team and supplier lists, quotes and agreements.

People and money are often the most important resources in a project.

NEED TO KNOW

The resource plan is not a static but a dynamic document. As circumstances change during the project, the project support team must monitor and adjust the resource plan continuously. This is an important task, not only because the resources required and used in a project directly affect the cost and the budget of a project. But also, because the project manager must ensure that the required resources are available to keep the project running smoothly.

A resource plan for a simple project can be mapped out and monitored via a simple MS Excel spreadsheet and/or MS Word Document. Resource plans for complex projects on a big scale will require the help of a project management software (e.g. MS Project) or resource management software, like, for example Smartsheet or Taskworld.

Resource name	Team	Project	Task	COST	16/02	23/02	02/03	09/03	23/03	30/03
Resource A	**Team A**									
		Proj A	1		5	5				
		Proj A	2					3	3	5
		Proj A	3				5			
		Proj B	4					2	2	
Resource B	**Team A**									
		Proj B	5		5	5				
		Proj B	6				5	5		
		Proj B	7						5	5
Resource C	**Team B**									
		Proj B	8		5	5	5	5	5	5

Table 2: An example resource plan

OVER TO YOU

Activity 3: Resource planning

Draw up a list of resources needed and use the template above to complete a plan of the resources you need for your business case.

Creating and managing the budget

When you start a project, it is difficult to know what it will cost in the end. However, a project sponsor usually wants to know the cost of a project. That is where the project budget comes in.

The project budget

The project budget is a detailed estimate of all costs required to complete the project tasks. It helps manage expectations and gives the project sponsor the opportunity to compare cost and benefit of a project before giving it the go ahead.

! NEED TO KNOW

The sponsor will usually expect the project manager to create the budget and commit to it, which will often require some negotiation. The project manager will naturally want to allow for more cost as the project manager will be accountable for the budget, where the project sponsor will want to save cost.

Often a **whole-life costing** is carried out, meaning a comparison of options and their associated cost and income streams over a period of time. It is aimed at answering the question, "What is the long-term cost of achieving the project objectives in this way?"

The project manager must make sure that the **budget** is accurate and includes contingencies covering uncertainties and potential changes of circumstance. This requires that budget input information like the **resource plan** is accurate to begin with.

The project manager will also need to know from the decision makers what kind of internal or external funding there is available for the project.

The project manager will closely monitor the budget over the project period and report any changes and variances to the project sponsor.

Costs

The costs included in the budget are:

- Direct costs: for staff, consultants, raw materials, equipment, licences, travel.
- Indirect costs: for costs that cannot be allocated directly, for example, for office space and equipment, and general administration. They are usually allocated via a percentage.
- Contingency costs: for unexpected events during a project; usually a percentage of the total project cost.

Costs can be fixed for a period, for example, for rent, buildings, machinery, and so on, or variable, meaning they vary with output, for example, like building cost.

Costs can either be established based on:

- supplier quotes, bids, service level agreements and contracts;
- estimations;
- advice from experts to support the above.

Budgeting approaches

In budgeting terms, there are two approaches to creating a budget:

- **The top-down**: the sponsor allocates a certain total to a project, which is then broken down to cover the different work packages and tasks.
- **The bottom-up**: the costs of individual work tasks and work packages are determined based on input such as resource plans and expert opinions and totalled up to the cost of the project.

The benefit of a top-down budget is that the major tasks are quickly identified, and the details can later be refined. However, the downside is that details might be missed and therefore the budget can be inaccurate.

The bottom-up approach is more time-consuming in comparison, but it is also the more accurate approach. It provides a detailed budget that can be used for monitoring purposes.

Both bottom-up and top-down complement one another. Often, both are used for project evaluation, to answer questions like:

- Is the amount we are allocating for the project sufficient and reasonable?
- Can we carry out all the tasks required for the project based on that amount?
- If not, which tasks or resources can we take out without jeopardising the project outcome? Do we have to negotiate with suppliers?
- Will the project sponsor allocate more money to the project?
- What can we do to cut the cost of the project?

These are the steps you as a project manager carry out in the budgeting process:

- Use your task lists, resource plans and supporting documents, as well as expertise and knowledge of team members and experts.
- Calculate the cost for individual work tasks and packages.
- Bundle the related costs in groups.
- Calculate the contingencies.
- Calculate the total budget cost.
- Compare your budget with the allocated project cost by the project sponsor (if applicable).
- Present the budget to the project sponsor and other decision-makers.
- Negotiate the accurate and reasonable project budget with the decision-makers.
- Get budget approved and signed off.
- Distribute the budget (or parts of it) to the relevant and involved parties.

The chart below outlines the steps for preparing a budget.

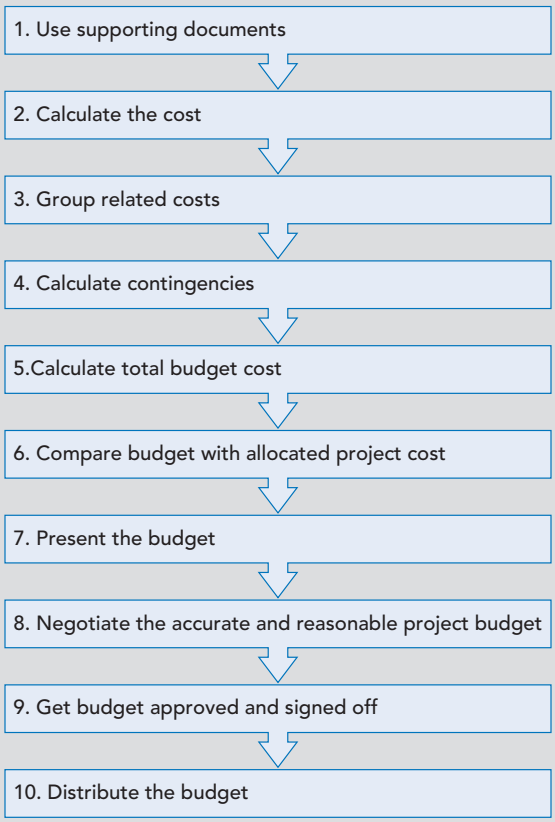


Figure 5: Steps in the budgeting process

Project cost and project budget templates can look like the examples below. These will form the basis for budget management.

Project budget

						Total	BUDGET	ACTUAL	Under (Over)
							$ 1,500.00	$ 450.00	$ 1050.00
WBS	TASK	Labour Hrs	Labour Rate	Materials Units	Materials $/Unit	Fixed Costs	Budget	Actual	Under (Over)
1	[Level 1 Category]						$ 1,500.00	$ 450.00	$ 1050.00
1.1	[Level 2 Task]	8.0	$12.50	25.0	$4.50	$500	362.50	150.00	212.50
1.2	[Level 2 Task]	10.0	$11.25			$250.00	362.50	100.00	262.50
1.3	[Level 2 Task]			30.0	$22.50		775.00	200.00	575.00
1.3.1	[Level 3 Task]						–		–
1.3.2	[Level 3 Task]						–		–

Source: Adapted from https://www.vertex42.com/ExcelTemplates/project-budget.html

Figure 6: Example of a project budget

Source of Project Cost

	PROJECT TASKS	LABOUR HOURS	LABOUR COST ($)	MATERIAL COST ($)	TRAVEL COST ($)	OTHER COST ($)	TOTAL PER TASK
PROJECT DESIGN	Develop Functional Specifications	1.0	$1.00	$1.00	$1.00	$1.00	$5.00
	Develop System Architecture	1.0	$1.00	$1.00	$1.00	$1.00	$5.00
	Develop Preliminary Design Specification	1.0	$1.00	$1.00	$1.00	$1.00	$5.00
	Develop Detailed Design Specifications	1.0	$1.00	$1.00	$1.00	$1.00	$5.00
	Develop Acceptance Test Plan	1.0	$1.00	$1.00	$1.00	$1.00	$5.00
	Subtotal	**5.0**	**$5.00**	**$5.00**	**$5.00**	**$5.00**	**$25.00**
PROJECT DEVELOPMENT	Develop Components	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Procure Software	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Procure Hardware	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Development Acceptance Test Package	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Perform Unit/Integration Test	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Subtotal	**0.0**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
PROJECT DELIVERY	Install System	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Train Customers	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Perform Acceptance Test	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Perform Post Project Review	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Provide Warranty Support	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Archive Materials	0.0	$0.00	$0.00	$0.00	$0.00	$0.00
	Subtotal	**0.0**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

Source: Microsoft, n.d. Project budget [online] Available at: https://templates.office.com/en-us/Project-budget-TM04022387 [Accessed: 13 Sept. 2017].

Figure 7: Microsoft template of project source

REVISION on the go

Budget management

The purpose of budget management is to control project costs within the approved budget and deliver the expected project goals.

The approved budget is the basis for budget monitoring and management which includes the:

- set up for monitoring purposes (actual cost vs. budget cost, weekly/monthly overview);
- appointment of the responsible support person;
- set up of reporting frequency and **key variance indicators**;
- budget reporting to project sponsor;
- planning and implementing of amendments and **counter action plans** for unforeseeable circumstances and changes.

OVER TO YOU

Activity 4: Project budget

Using a top-down approach to your budget, outline the pros and cons. Then, using your business case explain whether a top-down or bottom-up approach would work best for your costing and why.

Draw up a project budget in detail for your chosen project.

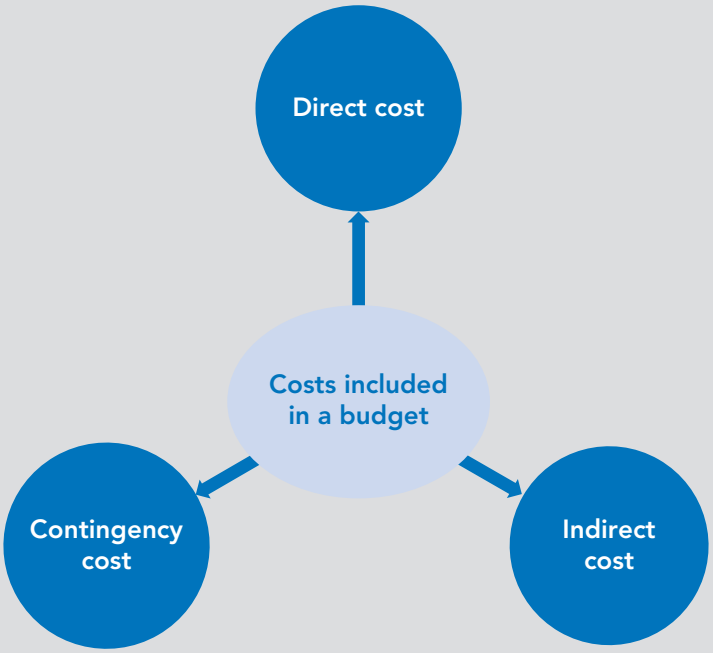


Figure 8: Costs included in a budget

3.3 Evaluate approaches for the identification and management of project/programme risks

"Every day you have opportunities to take chances and to work outside your safety net. Sure, it's a lot easier to stay in your comfort zone… in my case, business suits and real estate… but sometimes you have to take risks. When the risks pay off, that's when you reap the biggest rewards."

Donald Trump

"It's not the strongest or the most intelligent who will survive, but those who can best manage change."

Charles Darwin

Risks

Nothing in life, including running a business or a project, is without risk. To predict the future with certainty is impossible. There is always the possibility that things will not go according to plan, that circumstances may change and impact on your project, or that unforeseen and unexpected occurrences will happen.

The question is how much risk is there? How likely is the chance of something happening? How big will the impact on the project be? And how will it affect the bottom line?

The case study below shows how a clever manager looked at the current situation, identified new potential, and took a calculated risk, which improved the business performance dramatically.

CASE STUDY: WILLIAM AVERY

How William Avery took Crown Cork and Seal to new heights

Replacing a successful CEO is never easy.

William Avery took over the reins of Crown Cork and Seal from John Connelly who had saved the can business in 1989. John Connelly had run the company for over 30 years, following the same strategy for the entire period. The total return to shareholders over that period was just under 20% compound and Crown Cork and Seal was at a tipping point.

Avery had to re-evaluate Connelly's long-standing strategy, as cost efficiency couldn't work alone anymore, there were new competitors in the industry, margins were decreasing, a major rival was for sale, and the company's core metal can business didn't look like it would grow significantly in coming years.

Avery made the cutting-edge decision to grow through acquisition and introduce new and different products like plastic – and the company now manufactures one in five beverage cans used worldwide. So, don't be afraid to evaluate and think for yourself!

Source: Adapted from http://www.businessinsider.com/most-important-business-case-studies-2012-10#how-william-avery-filled-the-shoes-of-a-legend-12 and http://cr.middlebury.edu/alumni/digitalbridges2_0/course%20modules/B.%20Basics%20of%20Strategy%20-%20%20Structuralist%20View/CROWNCORKSEAL1989/Crown%20_Cork_Questions_Notes.doc

Projects usually run bigger risks:

- the longer they last;
- the longer the period is between planning and execution;
- the less experienced project members are;
- the newer the innovation or technology is.

NEED TO KNOW

Even though there is usually a negative connotation attached to risk, the outcome can also be positive. A risk with regard to a project can either mean that you fall short or that you exceed your project goals.

Risk management

A project manager usually wants to protect the project against negative risks which could jeopardise the project or parts of it.

In that sense risk management is about:

- identifying the potential risks;
- assessing and rating the likelihood of those risks happening;
- assessing the consequences and rating the impact on the project if those risks occur;
- developing plans for dealing with the consequences and impacts;
- reporting to decision-makers (such as project sponsors and key project team members) about the risks;
- monitoring the risk potential and status throughout the project;
- implementing contingency plans.

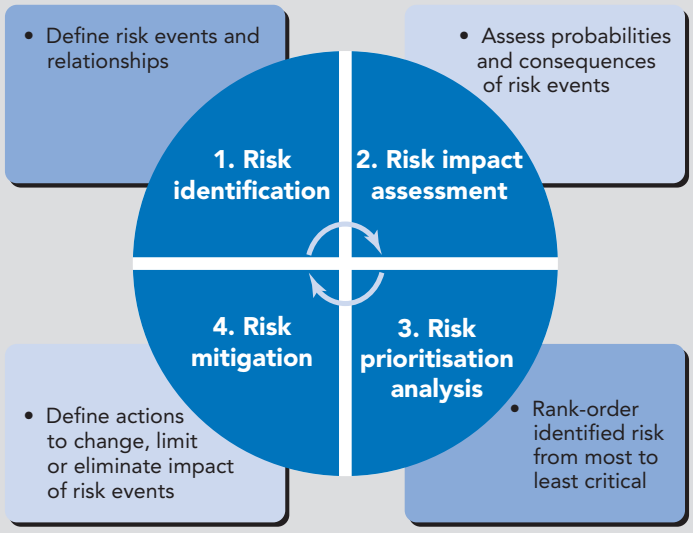


Figure 9: Risk tracking cycle summarised

Risk management is important as it will secure a project and protect it from unfavourable eventualities.

Identifying risks

Risk identification is usually a process involving the whole project team, experts and potentially decision makers, management and other stakeholders.

Every person has a different perspective, knowledge and experience and will contribute uniquely to the process. It will also ensure that the team is committed to continue monitoring the risk potential over the project period, and ensure that decision makers are fully aware of the risks and the impact potential attached to them.

Possible methods to identify risks are:

- information gathering techniques – based on reviews of past projects;
- checklist – establishes risk based on collected risk factors;
- assumption analysis – explores the validity of underlying assumptions;
- brainstorming – team input regarding all potential risks and mitigation options;
- interviewing – obtaining professional feedback from experts;
- SWOT Analysis – strength/weakness and opportunity/threat analysis on the project.

Assessing risks

The overall severity of risks can be assessed and prioritised as follows:

1. The risk likelihood: this measures how likely a risk is to occur based on a rating; the rating scale must be determined (say for example 1 to 10 or 1% to 100%).
2. The risk impact: this measures the impact on the project if the risk situation takes place; the rating scale must be determined (say for example 1 to 10, or 1% to 100%).
3. The risk severity: this measures the overall impact on the project and forms the basis for risk rating.

   Risk severity = risk likelihood × risk impact

A high severity score indicates that the project manager must take special consideration and preparation for mitigation plans with regard to the specific risk or risks.

The case study below outlines how taking a substantial risk can enhance a company's position in the market place.

CASE STUDY: RYANAIR

How Ryanair beat two giants of the industry

What happened? In 1986, the two Ryan brothers announced that their young airline would take on giants like British Airways and Aer Lingus for the first time on the route between Dublin and London. It significantly undercut those two airlines on price, bringing in people who had previously preferred rail or ferry tickets.

Source: Adapted from http://www.businessinsider.com/most-important-business-case-studies-2012-10#how-ryanair-beat-two-giants-of-the-industry-7

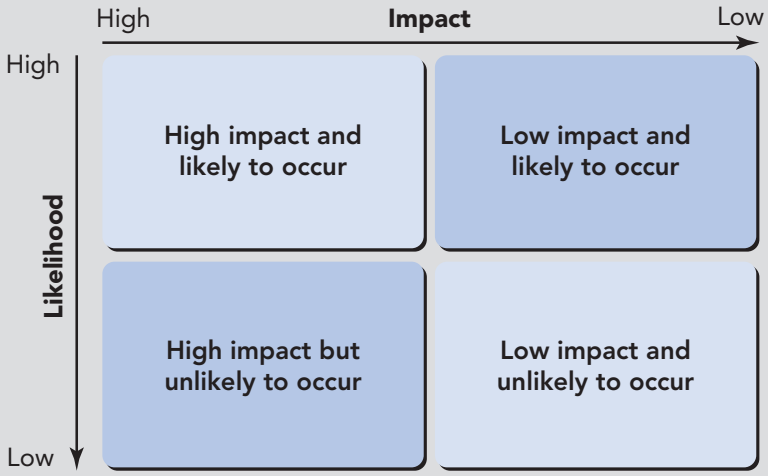


Figure 10: Risk and impact matrix

REVISION on the go

A project manager can reduce or avoid unpleasant surprises by identifying and managing areas of risks broken down into individual risks. Project risk factors can be identified within the following groups.

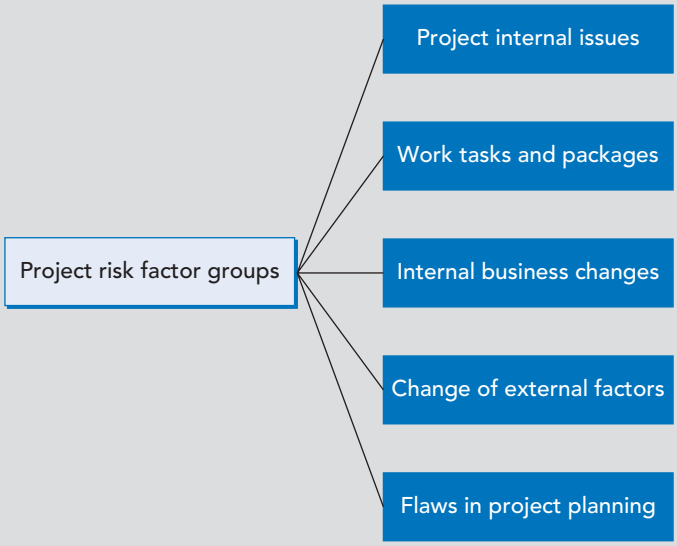


Figure 11: Risk evaluation

Individual risk factors

1 Within the project environment, for example:
- conflicts between team members and/or the team members and the project manager;
- the project manager has little authority in the organisation structure and little personal power to influence decision making and resources;
- priorities change with regard to the existing programme or project;
- project key success criteria are not clearly defined to verify the successful completion of each project phase.

2 Work tasks and packages, for example:
- schedules are too tight;
- delays;
- resources and requirements are not clearly defined or are changing.

3 Internal business changes, for example:
- change of business strategy and/or project goals;
- key decision makers are replaced;
- sale of business or division.

4 External changes, for example:
- changes in government regulations, taxes, trade regulations;
- change in economic climate, industry;
- technology changes or major new innovations disrupting the market;
- price increases.

5 Flaws in project planning, for example:
- key assumptions are faulty, which influences resource planning or budget.

To control the likelihood of a negative risk's occurrence, or to mitigate the effect of that risk if it should occur, organisations often use the 4 Ts.

1. **Transfer**: moving the risk to a third party so that they are liable for its management and impact.
2. **Tolerate**: taking the risk as a given, no action is taken to reduce or mitigate the risk.
3. **Treat**: controlling the risk through actions that reduce the likelihood of the risk occurring or minimise its impact.
4. **Terminate**: remove the risk, for example, by altering risky processes or practice.

The risks attached to a project will be documented in the **risk register**, a document that contains all the information about identified project risks, analysis of risk severity and evaluations of the possible solutions to be applied. This document is made available to the project team, the project sponsor and decision-makers.

OVER TO YOU

Activity 5: Identifying risks

How would you go about identifying the project risks in your business?

Draw up a risk register for the business case you prepared earlier in the chapter and outline how you would manage these risks.

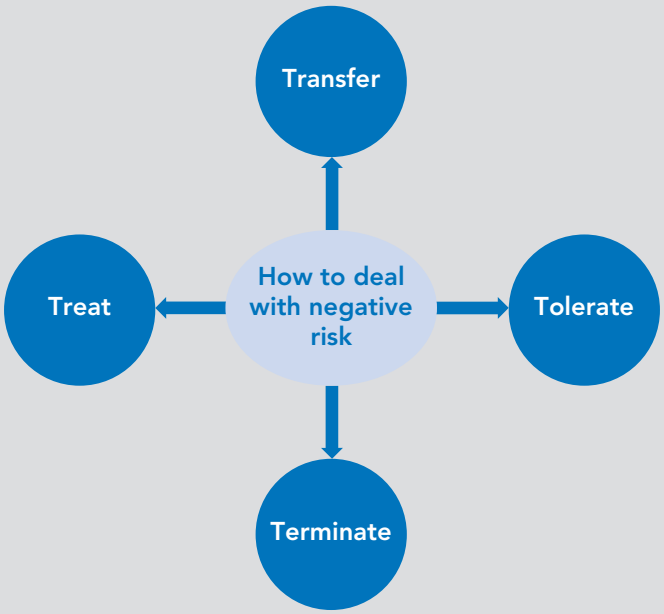


Figure 12: How to deal with negative risk

3.4 Discuss approaches to monitoring project/ programme delivery against milestones

> *Each day we must strive for constant and never ending improvement.*
>
> *Anthony Robbins*

Measuring success

Once the planning phase is completed and the decision-makers have agreed and signed off all the plans, you can start to implement the project.

NEED TO KNOW

To be considered successful, a project needs to run as close to the resource plan, budget, **forecasts** and timeline as possible. It is important that the actual project performance is measured against the planned performance throughout the project. This will enable the project leader to suggest and implement changes if they see that the performance in certain areas is not satisfactory. It also avoids unpleasant surprises at the end of the project.

Potential questions that the project manager might ask are as follows:

- Is everybody involved doing what they are supposed to be doing?
- Is the project on time? What is the plan for actual performance?
- Have milestones been achieved? If not, why not and when will they be achieved?
- Is the project on budget? What is the plan for actual performance?
- What does the cash flow look like?
- Are we achieving the planned ROI?
- Are the stakeholders informed?
- Are we still working towards the strategic goals of the organisation?

Measuring the project or programme performance is important to optimise the project and programme outcome. The project manager is accountable for controlling the project and taking any action needed to make sure the project delivers the expected outcomes. To track and manage progress, the project manager must have a system in place that feeds back information about any changes in the project plan.

The project plan

The project plan is the base for measuring progress as it defines the scope and assigns accountability and responsibility for activities. It also defines the baseline against which progress is measured (for example, schedule, milestones, costs and tolerated variances).

The project manager will determine **qualitative** and **quantitative** key performance indicators (KPIs) that they will monitor on a continuous basis throughout the project.

Key performance indicators (KPIs)

Project KPIs are measurable indicators that help to track a project's performance. Project managers need to monitor and understand their team's work process and lead the project towards long-term goals to make sure that a project is completed on time.

Qualitative KPIs can be obtained via:

- feedback meetings with project team members and external suppliers;
- questionnaires for team members;
- status reports from internal and external sources;
- review meetings with the project sponsor;
- external reports covering industry, market and environmental information.

Quantitative KPIs commonly used in project management are the following:

1 Planned Value (PV) is the budget assigned for a project activity or project activities. Total planned value for the project is known as Budget at Completion (BAC).

Planned Value = (Planned % Complete) × (BAC)

For example, you have a project that has to be completed in 10 months and the total cost is $50,000. Three months have passed and about 50% of the work should have been completed, as per your project schedule.

What is the PV value?

Project duration: 12 months

Project cost (BAC): $100,000

Time elapsed: 6 months

Percent complete: 50% (as per the schedule)

PV = 50% of $100,000 = $50,000

2 Actual Cost (AC) is the total cost incurred for the actual work completed to date.

For example, your project needs to be completed in 12 months and the total cost of the project is $100,000. Six months have passed and you spent $60,000.

The actual cost is $60,000.

3 Earned Value (EV) monitors the project plan, actual work and work completed to see if the project is on track. EV is also known as Budgeted Cost of Work Performed (BCWP).

The difference between PV and EV is that PV shows how much value you have planned to earn in a given time, while EV shows how much value you have earned on the project.

To calculate EV the actual percentage of the completed work is multiplied by the project budget.

Earned Value = % of completed work × BAC

Based on the above example the EV is $40,000.

4 Schedule Variance (SV) determines if you are ahead of schedule or behind the schedule; it is calculated by subtracting the planned value from the earned value (SV = EV – PV).

- If the SV is positive, the project is ahead of schedule.
- If the SV is negative, the project is behind schedule.
- If the SV is zero, the project is on schedule.

Based on the above example:

PV = $50,000

EV = $40,000

SV = $40,000 – $50,000 = –$10,000

This means the project is behind schedule.

5 Cost Variance (CV) determines if the project is over or under budget. The measure of cost performance in the project is calculated by subtracting actual cost from earned value.

Cost Variance = Earned Value (EV) – Actual Cost (AV)

- If CV is positive, the project is under budget.
- If CV is negative, the project is over budget.
- If CV is zero, the project is on budget.

Based on our example:

AC = $60,000

EV = $40,000

CV = EV – AC = $40,000 – $60,000 = –$20,000

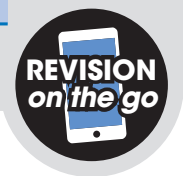
As the Cost Variance is negative, the project is over budget.

6 Return on investment (ROI) determines the percentage return for the money invested in the project; typically, it is used to determine whether a project will yield a positive payback and have value for the business.

7 Cash flow determines the liquid funds available at any given time in the project.

Calculating Cash Flow for January 2017	
Cash Flow – Operational Activities	**$200,000**
Cash Flow – Financial Activities	**$35,000**
Cash Flow – Investment Activities	**$15,000**
Total Output	
Net Cash Flow	**$250,000**

Figure 13: Example of a cash flow calculation



8 RAG: identifies the project status of individual project components (such as time, budget, risk, change, or resource, for example) based on flagging up the colours red, amber and green.

The meaning attached to the colours is in general:

- Green: the project is progressing to plan, for example, time and budget are within tolerances.
- Amber: the project may need assistance in the future; issues are currently dealt with by the project team, but management needs to be aware; for example, project budget or timescale is +/– % of tolerance.
- Red: the project or certain parts of the project are out of control and need to be escalated to management; for example, time and budget are +/– over tolerance.

You can adapt the RAG to your project requirements with regard to which components you want to include.

The easiest way is to allocate a RAG status to the whole project, but on larger projects or in complex portfolios you might want to break it down and apply a RAG status to each element such as budget, scope, resourcing or timescale. These can then be aggregated up to give you a project-level status.

Some companies use **BRAG**, which also includes the colour blue for completed projects. This can be useful for the project sponsor or programme managers who are dealing with a portfolio of many projects.

The table below outlines an example for a RAG status.

Dimensions	RAG status	Guidelines
Schedule	Green	Schedule is on target.
	Amber	There are likely to be minor delays in the schedule.
	Red	There will be delays of greater than 30 days.
Scope	Green	Scope is in line with agreed business case.
	Amber	There are likely to be minor changes in scope.
	Red	There will be a significant change in the scope delivered.
Cost	Green	Cost is on target.
	Amber	There is likely to be a cost overrun.
	Red	There is highly likely to be a cost overrun.
Benefits	Green	Benefits are on target.
	Amber	There is likely to be a reduction in benefits.
	Red	It is highly likely that there will be a reduction in benefits.

Table 3: RAG status for a project

Based on the feedback information the project manager obtains, they prepare regular progress reports for the project sponsor and the key stakeholders including:

- project plan objectives broken down into weekly or monthly targets (including milestones);
- actual to date achievements compared to the project plan objectives;
- key performance indicators (KPIs);
- RAG and detailed information on aspects that flagged up in amber or red;
- report covering key issues, changes and measurements;
- an up-to-date project forecast for the remaining period.

9 Timely identification and escalation: certain performance indicators will be determined prior to the project start, so risk incidents during the project can be identified and escalated in a timely and responsible manner; avoidance will almost certainly delay or worsen the consequences.

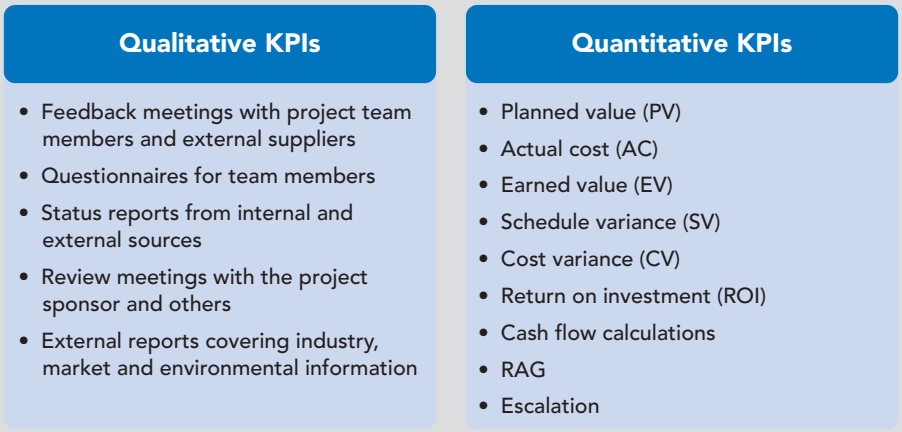


Figure 14: Qualitative vs. quantitative KPIs

REVISION on the go

3.5 Critically discuss the meaning and importance of benefits realisation

> *Not everything that can be counted counts: not everything that counts can be counted.*
>
> *Albert Einstein*

> *A project is truly successful only if it delivers the benefits an organisation envisions.*
>
> *Mark Langley, PMI President and CEO*

Realising benefits

Realising benefits is the sole reason for undertaking a project. Without benefits, there should be no project or programme.

In general, a **business programme** or project should focus on one or several of the following goals:

- maintaining or increasing revenue and profits;
- reducing costs;
- supporting or creating a solution for an internal or external issue;
- supporting the implementation of the strategic vision of the organisation.

Ideally, the project supports these overall goals by realising specifically defined benefits allocated to the project during the planning phase of the project.

Types of benefit

Benefits can be tangible or intangible.

- Tangible benefits can be measured or quantified.
- Intangible benefits cannot be measure or quantified and need to be explained.

Tangible

Examples of tangible benefits in the project are:

- Increased revenue or profit: the project has a direct impact on the revenue or profit of a division, department or the business, which is reflected in the financials.
- Cost savings for resources: the project helps to reduce cost, for example, if less raw material or labour is needed due to a new production process.
- Gain in productivity: this comes into play when the project optimises or automates certain processes, which cut down production time.

Intangible

Examples of intangible benefits are:

- Enhanced employee satisfaction: a project enhances the working environment for employees through better offices or equipment, therefore the staff are much happier working in the organisation.
- Gain of market share: this is closely connected to increase in revenue. When customers buy more products, market share increases.
- Enhanced customer satisfaction: a product is greatly improved in its design functionalities and therefore the customer enjoys it more.
- Improvements in communication: IT improvements increase the communication within an organisation, which makes it easier for employees to organise virtual meetings and conferences. Therefore, the co-operation between staff in different geographical locations is enormously improved.
- Creation of patents, copyrights, brand names, software, or special expertise: expert knowledge and invention create a better future market position for the organisation.

Managing benefits

Benefits management is defined by the Association for Project Management (APM) as "the identification, definition, planning, tracking and realisation of business benefits".

The programme or project manager is responsible and accountable for the project. Therefore, the project manager is also responsible for setting up and implementing the benefit management system. They will take the project plan into consideration, but will also rely on input and commitment from the project sponsor and other stakeholders. A good project manager will also include their team in the preparation and implementation of benefits management, to make sure that their team is committed to the process and the benefits outcome of the project.

Benefits management involves a series of steps over the whole life cycle of a programme or project.

- Identification of the benefits: this usually happens in the planning phase of the project. Strategic input and requirements are collected from the project sponsor or other stakeholders. Each benefit is listed and documented with regard to priority, value, timeline and responsibility/accountability. Dependencies between benefits must be examined carefully and mapped out.
- Definition of the benefit management plan: the management plan explains how the benefits are managed and who is responsible for their tracking and realisation over the project duration and possibly beyond. It outlines the baseline measurements, key indicators, milestones, variances and responsibilities.
- Planning of the benefit realisation: in this step, specific targets, acceptable variances, milestones and timelines are determined. The project manager will also agree with the project sponsor how often and in which format they will report to the project sponsor; also, how long the project manager has decision-making power in case of variances and when variances must be escalated to the project sponsor.
- Implementation of the programme or project: this is when the project planning phase ends and the actual project implementation begins. The benefits management is an important part of the project implementation.
- Tracking of benefit realisation: this step involves measuring the benefits realisation based on the determined indicators and methods. The project manager will compare the actual tracking results with the planned parameters and feed back to the project sponsor on a continuous basis. This process can carry on beyond the project end, as some benefits will materialise based on longer-term goals.
- Benefits evaluation: the objective is to evaluate the effectiveness of the programme or project, to compare the actual against planned for each individual benefit, to identify any lessons learned, to decide on follow-up actions and to create a detailed report for the project sponsor.

The identification of the benefits, the definition of the benefit management plan and the planning of the benefit realisation are part of the business case presented to the project sponsor and other stakeholders. It is important for the key decision makers to understand what the project entails and what benefits to expect from the project, and to commit to these.

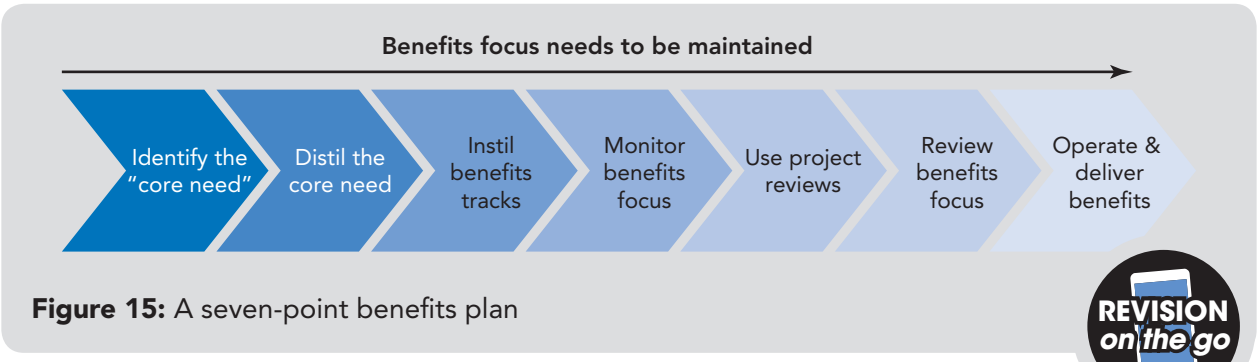


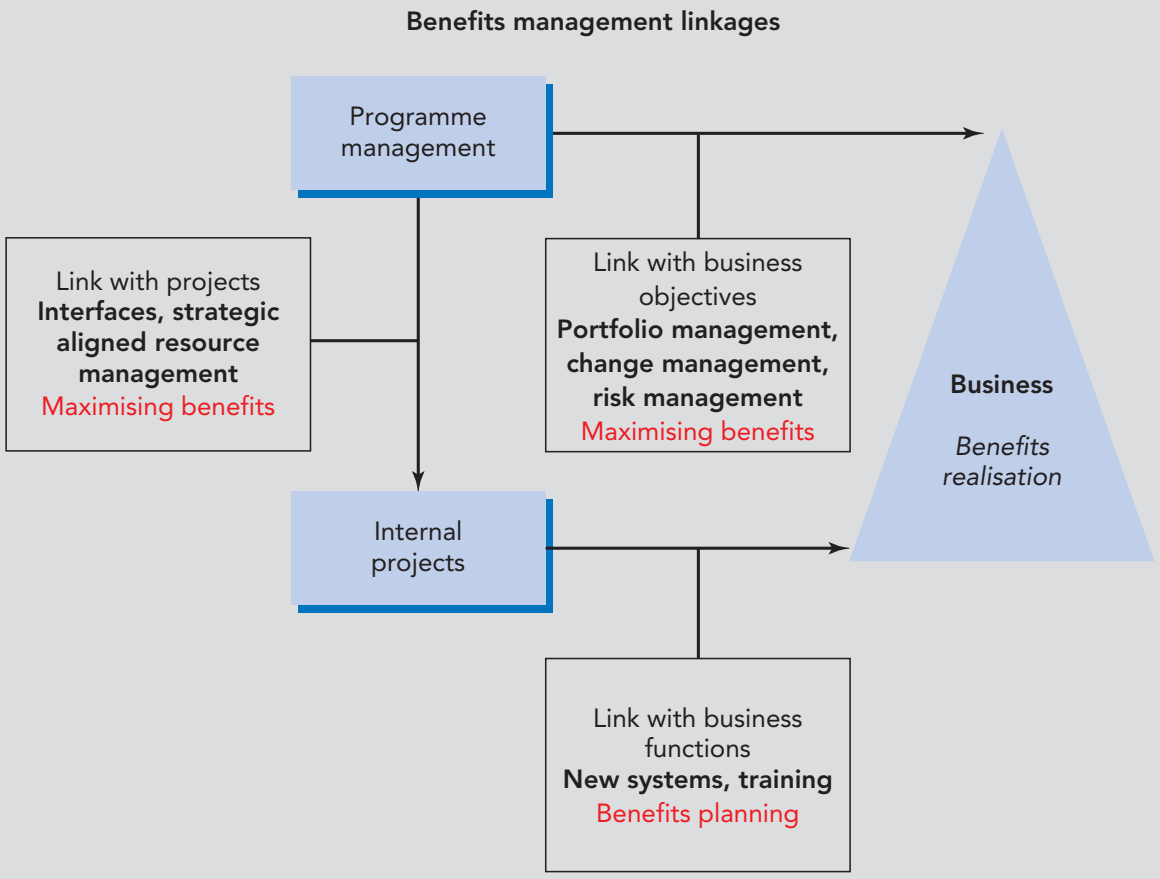
Figure 15: A seven-point benefits plan

> *If value is to be created and sustained, benefits need to be actively managed through the whole investment lifecycle. From describing and selecting the investment, through programme scoping and design, delivery of the programme to create the capability and execution of the business changes required to utilise that capability, and the operation and eventual retirement of the resulting assets. Unfortunately, this is rarely the case.*

Association for Project Management, Benefits Management Special Interest Group

Benefits management framework

Organisations often have several or even a portfolio of projects to deal with, for example, as part of longer-term programmes. Therefore, these organisations set up a benefits management



Source: Adapted from www.pmis-consulting.com/articles/benefits-realisation/

Figure 16: Benefits management linkages

OVER TO YOU

Activity 6: Benefits management framework

Set up a benefits management framework for your project to ensure that everyone involved understands the context and the linkages between the programmes, the projects and the overall business strategy.

Explain what will happen if a benefits plan is not established for your project.

READING LIST

Colin-Coulson Thomas, (1990) "Project Management: A Necessary Skill?" *Industrial Management & Data Systems*, Vol. 90 Issue: 6, pp. 17–21. (This article will be available in your online student resources.)

Bob Little, (2011) "The principles of successful project management: It takes careful planning, skilful leadership … and a little bit of luck", *Human Resource Management International Digest*, Vol. 19 Issue: 7, pp. 36–39. (This article will be available in your online student resources.)

Pierre Hadaya, Luc Cassivi, Chahinaze Chalabi, (2012) "IT project management resources and capabilities: a Delphi study", *International Journal of Managing Projects in Business*, Vol. 5 Issue: 2, pp. 216–229. (This article will be available in your online student resources.)

Summary

The success of a project depends very much on the project manager's ability to combine, implement and track the various planning tasks. He has to ensure that the project is on track, in line with the business strategy and that the stakeholders are informed and aware of all important steps and possible variations to the initial plans.

Chapter 4

The Role of Partnerships in Project Management

Introduction

Projects can be complex and challenging. They often require a huge variety of resources one business or department may not be able or willing to provide on its own. Partnerships bring parties together, parties who have an interest in achieving a goal, who can provide complementary resources and who in general support the implementation of a specific project. This chapter explores the role of partnerships in project management.

Learning outcome

On completing this chapter, you will be able to:

4 Critically review the roles of partnership in project management

Assessment criteria

4 Critically review the roles of partnership in project management

- 4.1 Review the role of partnership in project management
- 4.2 Critically discuss the characteristics of an effective project partnership
- 4.3 Analyse how to monitor and manage project partnerships through to conclusion

4.1 Review the role of partnerships in project management

Reasons to form a project partnership

> *"Win-win is a belief in the Third Alternative. It's not your way or my way; it's a better way, a higher way."*
>
> *Stephen Covey*

> *"Our success has really been based on partnerships from the very beginning."*
>
> *Bill Gates*

Adding value

Partnerships are very common in business and in project management. The underlying belief and expectation is that combining forces will add more value to the partners, above and beyond what the entry, running and exit of the potential partnership will cost. Every partner expects that the partnership will help to improve their position.

Businesses seek project partnerships to add value through combined efforts. Although organisations may have different structures and approaches, they can work together toward common purposes and achieve shared results.

The most common reasons why businesses form project partnerships are:

1. Share of investment or cost: projects require an initial investment as well as ongoing working capital. Depending on the programme or project, these costs can be substantial. A partnership can reduce the cost for all partners involved.
2. Share of risks: if a business implements and runs a project on their own, they will carry the whole risk themselves. In a partnership, all partners will carry the risk. In addition to the financial implications this can also provide security and confidence for each partner.

3 Co-operate instead of compete: sometimes there are several players in one market or industry, all working on the same development project or technology. This can mean high costs for everyone if they compete against each other in the market. In the worst case scenario, it could mean that none of them wins. Instead of competing in the marketplace they may decide to join forces instead.

4 Combine or complement knowledge or expertise, (for example, technology): not everybody is good at everything; this is the same for businesses as well as people. A project might require different aspects of expertise with regard to knowledge and technology, for example; instead of reinventing the wheel, businesses partner up to pool their expertise, knowledge and resources for the purposes of the project.

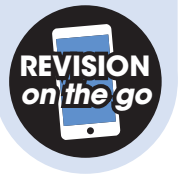
5 Increase impact and power in the market: when businesses partner up for certain programmes they can increase their dominance; it can even mean that the partners take over a whole industry based on their partnership.

6 Commit external suppliers to a project or programme and secure resources: relationships with suppliers can be difficult, especially when it comes to the ongoing availability and supply of resources, pricing, and delivery to competitors. A partnership can tie in the external supplier and commit him to a programme or project longer term.

7 Facilitate entry into other (international) markets, gain market know-how: it is extremely time-consuming and costly to gain the knowledge a business will need for it to enter and compete successfully in a new market. A partnership with a local player can provide instant expertise far more easily than the business going in on its own.

! NEED TO KNOW

The entry into a potential project partnership needs to be thought through properly to make sure that it is a good fit for both parties. It is important for each business to be clear on the objectives and values of a partnership.



Questions the business might want to ask include:

- Why are we looking for a partnership?
- Why would a partnership be better than doing the project on our own? Is it a win-win?
- What are we looking to achieve? What are our goals?
- What are our expectations regarding the partnership and towards our partner/s?
- What kind of partnership are we looking for?
- What are we prepared to give, and what do we expect to receive in return?
- Are we looking for a partnership for the project only or for a longer-term partnership?
- Do we have the same goals and expectations?
- Who has control? Is it shared or does control lie with one partner?
- Can we trust our partner?
- What if it does not work out? What are the mitigation plans?
- How long will the partnership last, when will it close and how?

OVER TO YOU

Activity 1: Partnership pros and cons

Answering the questions above that a business might ask when deciding on a partnership, do you believe that your business case requires a partnership? What do you gain or lose by your choice?

Partnership forms and set up

There are different forms and structures of partnerships to choose from, depending on the requirements and expectations of the project and the parties involved. Common examples are:

- Collaboration: a co-operative arrangement when two or more parties, who may or may not have any previous relationship, work jointly and support each other in achieving their respective goals. The partners usually stay independent and the respective organisations do not commit long term.
- Strategic alliance: an arrangement between two companies to **share resources** regarding a specific, mutually beneficial project. A strategic alliance is less involved and less permanent than a **joint venture**, in which two companies typically pool resources to create a separate business entity.
- Joint venture: a business arrangement where two or more parties, usually businesses, form a partnership to share markets, intellectual property, assets, knowledge, and, of course, profits for a **joint project**.
- Company formation: the partners involved form a **new legal entity** with regard to the project purpose. This requires a fixed and ongoing commitment from the partners involved.
- Continuing service or supply agreement: an agreement between a business and a contractor with regard to the ongoing (or time-limited) **supply of services** or supplies. This includes type of supply, requirements, pricing and payment arrangements.
- Cost-sharing agreement: two or more partners agree to provide different resources, facilities, staff or equipment, entailing a set **cost contribution** from each partner.

The case study below shows how a partnership can achieve goals a company would find difficult to achieve on its own.

CASE STUDY: BARILLA AND COMPASSION IN FOOD

Improving animal welfare within the supply chain

Founded in 1877, Barilla started out as a shop producing pasta and bread. Today the Barilla Group has become a world leader in the market for pasta and ready-made pasta sauces in continental Europe, for bakery products in Italy and for crispbreads in Scandinavia.

Barilla has 26 offices around the world (One in Italy, 14 in Europe and 11 in the rest of the world), and 30 production sites (14 in Italy, 10 in Europe and six in the rest of the world), with an average yearly revenue of €3,254 million.

Compassion started its engagement with Barilla in 2010, supporting the company's aim to improve animal welfare across its supply chain. Since then, Barilla has made significant welfare policy commitments across its business, brand by brand, clearly demonstrating its leadership and commitment to animal welfare.

Source: Adapted from www.compassioninfoodbusiness.com/media/7426617/barilla-case-study.pdf

OVER TO YOU

Activity 2: Different types of partnership

Draw up a list of blue chip companies as examples of the types of partnerships listed above. Explain which partnership type is best for your business case.

4.2 Critically discuss the characteristics of an effective project partnership

> *It is rare to find a business partner who is selfless. If you are lucky it happens once in a lifetime.*

Michael Eisner

> *Look for three things in a person – intelligence, energy and integrity. If they don't have the last one, don't even bother with the first two.*

Warren Buffet

The key elements of a successful partnership

Every successful partnership contains certain key elements and requirements:

- Common understanding: partners need to understand each other's organisational and project framework, culture, values, expectations and management. Partners also need a clear understanding of the roles and responsibilities of the project team members, key decision makers and stakeholders.
- Purpose: partnerships must be guided by a shared vision and purpose that builds trust and recognises the value and contribution of all members. Each partner must understand and accept the importance of the agreed project goals. This is the basis needed for policies, programmes, and service delivery. Shared and transparent decision-making processes throughout the project are also essential to achieving the joint goals.
- Culture and values: shared values, mutual understanding, and an acceptance of differences (e.g. norms and ways of working) are essential to successful partnerships. Partners need to discuss their organisational cultures to help each identify how to work with the other's strengths and weaknesses. It is especially important for project team members to understand each other.
- Agreements and structure: partnerships need a clear, documented purpose and structure, so that all parties know where they stand, what is expected and what their responsibilities and rights are. This is especially important in regard to dealing with conflict and exits. A partnership agreement is a contract between partners which sets out the terms and conditions of the relationship between the partners, including percentages of ownership and distribution of profits and losses, management powers and the duties of each partner.
- Defined leadership: partnerships imply a shared leadership between partners who have authority in their own organisations to build consensus and resolve conflicts. It must be clear who leads which parts of the project; this should be respected by all partners involved.
- Performance management: the appropriate project partnership structure, practices, and resources must be in place to achieve the intended purpose of the partnership. All members of the team must understand and fulfill their responsibilities and be accountable.
- Communication: there must be effective communication within the project team and between the partner organisations. It is essential that structures are in place ensuring that all partners receive timely information.

- Mutual benefits – win-win, give and take: all partners must believe that they are in a win-win situation and all involved must pull their weight. Even if the partners' individual contributions differ in kind, each must be **perceived** by all partners to be of the same value. If not, this will create an imbalance which will affect the partnership and the project negatively.

Barriers to successful partnerships

On the other hand, there are certain barriers or issues which can affect a project partnership negatively or even cause it to fail. Any problems coming up during the co-operation must be addressed and resolved to ensure that the joint goals are achieved.

Typical issues that cause **problems** in project partnerships are:

- limited vision or failure to inspire;
- lack of clear purpose or inconsistent understanding of purpose;
- competition between partners for leadership or domination by one partner;
- unequal and/or an unacceptable balance of power and control;
- lack of support from organisations with decision-making power in the partnership;
- key stakeholders missing from the partnership;
- lack of commitment or unwilling participants;
- differences in philosophies or work styles;
- inadequate understanding of roles and responsibilities;
- hidden agendas;
- failure to communicate;
- failure to learn;
- lack of evaluation or monitoring systems;
- financial and time commitments outweighing potential benefits.

The below case study shows how partnerships can help to accelerate the change of a business strategy to successfully meet new market requirements.

CASE STUDY: LINKIN PARK AND HARVARD

What happened when Linkin Park asked Harvard for help with its business model

How do musicians make money today? Album sales are down 14%, single downloads are down 11%, and only the streaming services are up, by 28%. Technology has forced music artists to completely rethink the way they approach their businesses. We have all had to adapt.

The most successful artists in this new landscape have begun to look at new business models and new industries to strengthen their existing brands. They are extending their brand into areas like technology, gaming, fashion, and lifestyle content – essentially becoming entertainment platforms.

Here at Machine Shop, the wholly owned innovation company of the alternative rock band Linkin Park, we identified the need to think differently years ago. Machine Shop was born in drummer Rob Bourdon's living room in 1999 when the band was packing CDs and stickers into boxes to send to their very first fans, long before any of their music had hit the radio waves… ["Linkin Park Underground"] fan club gave the band a deep understanding of the importance of direct relationships. Today, Linkin Park is one of the biggest bands on Facebook, with over 63 million fans across the globe, and is particularly popular in Japan, India, Brazil, China, and Germany (and the US, of course).

For more than a decade, Linkin Park and Machine Shop enjoyed success and continued to innovate… but by 2013, Linkin Park and Machine Shop had to address the fact that digital music (first downloads and then streaming) had changed the business dramatically. So, they began to prepare for their next decade.

A new model

I met the band at this inflection point. Rather than incremental change, they wanted a true paradigm shift, so the group appointed me Machine Shop's Executive Vice President. I had experience in marketing, business, and finance – all of it outside the traditional music business. When I looked at the global reach of Linkin Park, and the potential business opportunities outside the narrow category of music, I could see plenty of "blue ocean".

We restructured Machine Shop to focus on innovation through non-traditional business partnerships and creative design thinking. Over the course of a year, we built strong case studies in fashion, design, and technology. Once this groundwork was laid, we realised that the traditional music management model would have to evolve to support these innovation activities. Most management companies consist of music industry professionals and digital departments that support music marketing activities – but what we were trying to do just didn't exist within that framework.

So we parted ways with our outside management agency in late 2014 and we brought all core business operations in-house… the move allowed us to venture freely into diversified revenue models to complement our music sales. Our business now operates like a tech start-up, with less hierarchy and far more agility.

Enter Harvard Business School

To help think through this critical strategic restructuring, we turned to a leading expert on marketing strategy for media and entertainment firms, Harvard Business School Professor Anita Elberse. In collaboration with Elberse and her students Blaire Lomasky, Neil Wusu, and Jingping Zhang, we conducted a semester-long independent study on the business of Linkin Park.

[In phase I] we learned that we needed to:

- build a differentiated brand ecosystem that partners want to buy into;
- use creative content to communicate our brand's point-of-view;
- ensure that our brand ethos is clear and that it is reflected in every brand touchpoint
- diversify revenue streams across multiple business verticals to mitigate financial risk and extend our brand message;
- partner with a broader community or network of global influencers to remain tapped into cutting-edge cultural trends.

In Phase II, we dissected the Linkin Park ecosystem and constructed a framework to execute our new long-term vision. We restructured Machine Shop, moving it from a brand agency model to a multi-pronged innovation model based on four verticals: video content, global brand partnerships, merchandise, and venture capital.

Source: https://hbr.org/2015/06/what-happened-when-linkin-park-asked-harvard-for-help-with-its-business-model

4.3 Analyse how to monitor and manage project partnerships through to conclusion

A project partnership arrangement must be thought through carefully to ensure a successful collaboration and to avoid problems later. Whatever form of project partnership and respective commitment is envisaged in theory, a successful partnership needs time to grow and develop. A partnership is not about legalities, but about the forming of relationships.

The different phases of a project partnership

There are several phases a partnership goes through:

- **Defining need** and **purpose**: this is the phase where the partners establish if and how they can achieve more together than on their own. It is about defining self-interest and individual benefits as much as mutual benefits. In this phase partners get to know each other and explore whether in principle they have similar ideas, can work together, their organisational culture fits and whether or not they can trust each other.
- Identifying the **structure** of the partnership and process formation: it is important to identify and negotiate a mutually beneficial structure for all partners involved. How loose or committed the partners want to be, what they are prepared to bring to the table, when and how they want to exit should all be agreed at the outset. Ground rules need to be set, and respect and trust should be established. The individual members of the partnership should get to know each other and learn how they can co-operate.
- **Setting up** the project partnership: this phase is about the legalities of the partnership, such as drawing up a partnership agreement and setting up the legal structures, like company formations, if required. The partnership agreement sets out the key objectives, procedures, structure, decision-making process and powers and outcomes of the project partnership. It is essential that this document reflects the business plan or strategy that forms the basis of the partnership's work. It will create structure and set boundaries, but also create a sense of shared purpose and responsibility. During the setup stage partners will also set up the project plan and agree on their performance management.
- **Day-to-day running** of the project partnership: this is the phase when the project manager takes over and leads the project based on the work plan. Ideally, team members from different organisations manage to create understanding and a collaborative project working environment. The project manager and the team members know exactly what the framework is, what is expected and what they should deliver. The project sponsor/s and other key decision makers are not actively involved on a continuous basis, but are kept informed via project reports and will be alerted if unexpected circumstances impact the project negatively.
- **Evaluating and monitoring** of the project partnership: early in the project, the partners must decide on methods for evaluating the project's performance and for revising aims and objectives in the process. The aim is to keep the project on track, to report progress to the partners, to provide feedback to team members and so on. It is also important to monitor the working conditions and co-operation of the team. This helps to identify conflict potential and relationship risks before they escalate. It is also important to evaluate and monitor the partners' organisational support and back up for the project.

  Monitoring and evaluation also helps partners anticipate changes that may affect the project partnership so they can collaboratively plan for the implications of such change.

For instance, this helps the partnership to:

- adapt to competitive or regulatory environment changes;
- expand, reduce, or shift the focus of a partner relationship, as needed;
- respond to reorganisation of key project team members;
- reduce negative effects of changes in a partner's organisation.

Closure of project partnership: there will be a time when the purpose of the project has been achieved and therefore the project will either transition into something else or come to an end. Project teams might get allocated another purpose or the team might dissolve. In the case of the project ending, issues to be dealt with are; what to do with the team members, facilities, equipment, legal structure and so on. This is the time to review the success of the project and learn lessons from the process and outcome. This should happen on the individual level as much as on the project team level or organisational level. A project review report will give everyone involved the opportunity to take away the project experience and the lessons learned.

In some instances, one organisation may not want to leave the partnership. In this case, the partners need to discuss what would need to change so everyone's interests are protected.

Ultimately, partnerships are effective only when all members see a value in continuing their participation and can willingly work together to achieve the common purpose. Too often, partnerships are suddenly faced with the end of the relationship without substantial communication between members. Or they might terminate without a real ending, gradually dwindling down without formally closing out. It is important in the early stages of a project to discuss, plan for, and formulate exit strategies to avoid conflict at the closure stage. This is mainly done in the framework of the formal partnership agreement, which will also address cases of early exit and one-sided requests for exiting the partnership.

The case study below highlights how a successful partnership can impact suppliers of a world-wide industry.

CASE STUDY: EARTHWATCH AND STARBUCKS

Promoting sustainable farming practices

Earthwatch and Starbucks have partnered to support scientific research and employee engagement. Together, they have promoted sustainable farming practices in one of the world's premier coffee-growing regions [Costa Rica]...

In 2007, the partnership evolved to develop new tools and practices to encourage and facilitate more sustainable coffee cultivation practices, while linking together the consumer, buyer, and producer dimensions of the supply chain…

Participants learn about key relationships between sustainable practices and quality coffee… farmers can increase coffee yields by up to 25% by reducing the use of fertilisers and reducing soil acidity, thereby creating financial returns of up to US$1,200 for farmers and improving environmental outcomes.

Source: eu.earthwatch.org

Conflict and resolution in partnerships

> *Conflict is inevitable, but combat is optional.*
>
> *Max Lucado*

It is inevitable that all partnerships go through **conflict**. However, the way the conflict is handled and resolved by the parties involved will determine whether:

- the conflict escalates and negatively affects the partnership.
- the conflict acts as a stepping stone to learning and positively affects the partnership – with both parties gaining a better understanding and perspective.

Causes of conflict

Some of the potential causes of conflict in project partnerships are:

- lack of support or follow-through by one or both partners' organisations;
- unclear structures give room for lack of responsibility and accountability;
- expectations don't match the progress or outcome of the project;
- lack of communication or miscommunication;
- changes in one of the partners' organisations jeopardises the project;
- partners don't meet their commitments;
- key personnel in the organisations or project team leave or are unhappy;
- the project team does not gel or come together;
- team members are competitive or primarily support only one partner's interest;
- the organisations' respective project sponsors do not collaborate;
- the project manager lacks authority and standing in the partner's organisation.

Conflict resolution

At its core, and whatever the context, conflict is caused by people's perceptions, feelings, attitudes and fears. Therefore, conflict can only be resolved with the personal involvement of the parties involved. **Conflict resolution** depends very much on how individuals perceive conflict and how they handle it. Therefore, it is important to understand our own individual approach to conflict and conflict resolution. Self-awareness gives us the power to change the course of conflict and end it with a positive (or at least mutually acceptable) outcome.

Conflict style

One of the most influential conflict style inventories is the **Thomas-Kilmann model** designed by psychologists Kenneth Thomas and Ralph Kilmann. It illustrates the options an individual has when handling conflict and assesses the individual's behaviour in conflict situations.

Kilmann describes a person's **behaviour** as following one of these two styles:

1 Assertive: the extent to which the individual attempts to satisfy his or her own concerns, i.e. a focus on their own or their employer's goals.

2 Co-operative: the extent to which the individual attempts to satisfy the other person's concern, i.e. a focus on the other party's goals.

Kilmann uses these two types of behaviour to define **five methods of dealing with conflict**. Different methods of dealing with conflict will be appropriate in different situations.

- Competing: assertive and uncooperative; individual is power-oriented.

  Appropriate when: PM is negotiating best deals with suppliers.

- Collaborating: both assertive and co-operative; individual explores the conflict to find a creative solution that fully satisfies both parties, concerns.

  Appropriate when: PM is negotiating with a functional manager in their organisation.

- Compromising: intermediate in both assertiveness and co-operativeness; individual wants to find a mutually acceptable solution that *partially* satisfies both parties.

  Appropriate when: PM is trying to reach agreement with a major stakeholder.

- Avoiding: unassertive and unco-operative; the individual does not address the conflict.

  Appropriate when: the PM is faced with conflict that can't be resolved, but which might die down over time.

- **Accommodating**: unassertive and co-operative; individual neglects his or her own concerns to satisfy the concerns of the other person, self-sacrifice.

  Appropriate when: the PM is faced with a strict new industry or government ruling.

Kilmann established **a self-scoring assessment** via 30 two-option statements to be answered by the individual. Based on the answers, the **TKI model** establishes a profile and indicates and ranks the conflict-handling modes of a person in a conflict situation. This helps individuals to understand their own role and contribution in a conflict and how they can influence a more beneficial outcome. Ideally, all parties involved seek collaboration and strive to achieve a win-win situation.

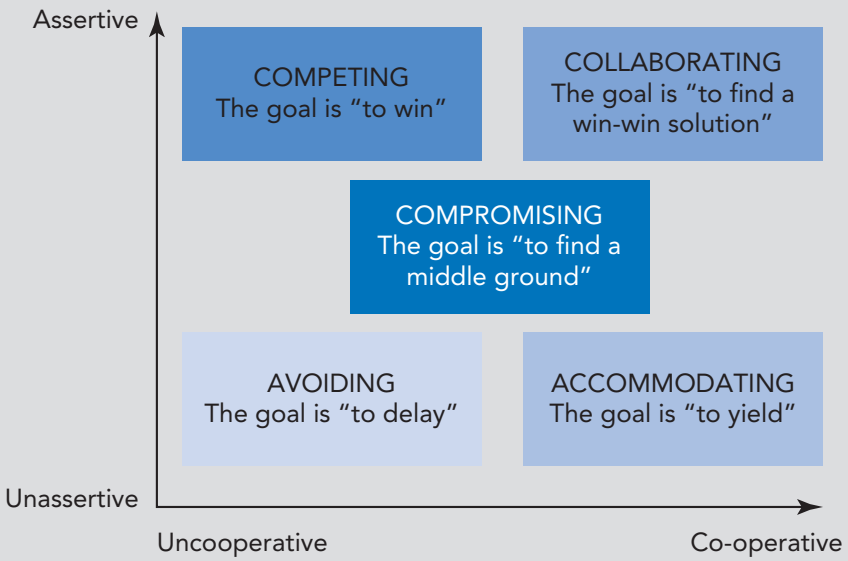


Figure 1: Kilmann's five methods of dealing with conflict

Figure 2: Types of partnership

CASE STUDY

A large ocean liner was headed across the Atlantic from Portsmouth to New York. As it neared its destination at night, a lookout on the wing of the bridge reported, "Light, bearing on the starboard bow."

"Is it steady or moving astern?" the captain called out.

The lookout replied, "Steady, captain," which meant that they were on a collision course.

The captain then called to the signalman, "Signal that ship: 'We are on a collision course, advise you change course 20 degrees.'"

Back came a signal, "Advisable for you to change course 20 degrees."

The captain said, "Send, 'I'm a captain, change course 20 degrees.'"

"I'm a seaman, second class," came the reply. "You had better change course 20 degrees."

By that time the captain was furious. He spat out, "Send, 'This is the mighty ocean liner, HMS *Franconia*. Change course 20 degrees.'"

Back came the reply, "This is a lighthouse, suggest you change course 20 degrees."

Source: Anonymous

OVER TO YOU

Activity 3: Conflict resolution

Read the text above taking into consideration what you have learned during this module. Write down some advice for how to manage a project partnership to conclusion, based on your interpretation of the text.

READING LIST

Sjur Børve, Asbjørn Rolstadås, Bjorn Andersen, Wenche Aarseth, (2017) "Defining project partnering", *International Journal of Managing Projects in Business*, Vol. 10 Issue: 4, pp. 666–699. (This article will be available in your online student resources.)

Wenche Aarseth, Bjørn Andersen, Tuomas Ahola, George Jergeas, (2012) "Practical difficulties encountered in attempting to implement a partnering approach", *International Journal of Managing Projects in Business*, Vol. 5 Issue: 2, pp. 266–284. (This article will be available in your online student resources.)

Summary

Partnerships have an important place in project management, combining complementary skills and resources and helping the parties involved to achieve goals they might not be able to achieve on their own. Successful partnerships require good planning, open communication and tested methods for avoiding or dealing with conflict.

Glossary

Accommodating Fit in with someone's wishes or demands in a helpful way.

Appraisal A formal assessment.

Assertive Having or showing a confident and forceful personality.

Asynchronous Not existing or occurring at the same time.

Autocratic Taking no account of other people's wishes or opinions; domineering.

Bottom line The final total of an account or balance sheet.

Brainstorm Hold a group discussion to produce ideas.

Budget An estimate of income and expenditure for a set period of time.

Business programme A series of related projects to meet the overall objective.

Business strategy The means by which the programme sets out to achieve its desired ends (objectives).

Cash-flow Determines the liquid funds available at any given time in the project.

Collaboration When two or more parties work jointly towards a common goal.

Collaboration tools Technology tools that can be used to help people work together to achieve a common goal or objective.

Common purpose To have the same goals.

Consultants People who provide expert advice professionally.

Contingency A provision for a possible event or circumstance.

Conflict resolution A way for two or more parties to find a peaceful solution to a disagreement between them.

Contract Defines all work required, each party's obligations and any limits to either party.

Contractors People or firms who accept a contract to provide materials or labour to perform a service or do a job.

Corporate strategy The direction an organisation takes with the objective of achieving business success in the long term.

Counter action plans Acts of retaliation; counter attacks; any action in opposition to a previous action.

Delegate Entrust (a task or responsibility) to another person, typically one who is less senior than oneself.

Deliverables A thing which is able to be provided, especially as a product of a development process.

Domain An area or territory (here the business domain).

Empathy The ability to understand and share the feelings of another.

Empower Give (someone) the authority or power to do something.

Fixed-price contract A type of contract where the payment amount does not depend on resources used or time expended.

Forecasts Predictions and estimates of future events and trends.

Freelancers Self-employed individuals hired to work for different companies on particular assignments.

Functional structure Most common organisational structure wherein the organisation is divided into groups based on specialised functions like HR, marketing, finance and so on.

Hierarchy A system in which members of an organisation or society are ranked according to relative status or authority.

Intangible That cannot be assessed, felt, measured, or moved because it has no physical substance.

Integrity The quality of being honest and having strong moral principles.

Interactive communication Two or more people interact with each other.

Joint venture A business arrangement where two or more parties, usually businesses, form a partnership to share markets, intellectual property, assets, knowledge, and, of course, profits for a joint project.

Key variance indicators The difference between a budgeted, planned, or standard cost and the actual amount incurred.

Lump sum contract A lump sum contract (or stipulated sum contract) is the traditional means of procuring construction, and still the most common form of construction contract. Under a lump sum contract, a single "lump sum" price for all of the works is agreed before the works begin.

Manpower Efficiency of the project team and people who bring the right qualifications, experience, discipline and attitude to the project.

Market trends A perceived tendency of financial markets to move in a particular direction over time.

Matrix organisational structure Designed to achieve specific results by using teams of specialists from different functional areas of the organisation.

Micromanaging Control of every part, however small, of an enterprise or activity.

Milestones A significant stage or event in the development of something.

Mission The aim of the business.

Organisational chart Outlines how the different components interlink and relate to each other.

Organisational structure A system that defines authority, responsibility, accountability and communication in a business organisation.

Productivity The effectiveness of productive effort, especially in industry, as measured in terms of the rate of output per unit of input.

Project business case Outlines the benefits of a project, and justifies the money and effort required to implement it and carry it through.

Project organisation A structure that facilitates the co-ordination and implementation of project activities.

Project originator Identifies a certain "need" for a project; he or she can come from any function or level in the organisation or even from outside the organisation.

Project plan The base for measuring progress as it defines the scope of the project; it assigns accountability and responsibility for activities. It also defines the baseline against which progress is measured (for example schedule, milestones, costs and tolerated variances).

Project sponsors Champion the cause of the project throughout duration.

Pull communication The sender places information at a central location like a portal or share drive and the recipients are responsible for retrieving the information from there.

Push communication One-way streaming of information, sending information without the expectation of feedback from the recipient.

Qualitative Relating to, measuring, or measured by the quality of something rather than its quantity.

Quantitative Relating to, measuring, or measured by the quantity of something rather than its quality.

Reimbursable To be repaid or compensated for.

Resources A stock or supply of money, materials, staff, and other assets that can be drawn on by a person or organisation in order to function effectively.

Resourcing plan Outlines the resources needed for the project.

Return on investment (ROI) Determines the percentage return for the money invested in the project; typically, it is used in determining whether a project will yield a positive payback and have value for the business.

Risk identification A process involving the whole project team, experts and potentially decision makers, management and other stakeholders.

Risk register A document that contains all the information about identified project risks, analysis of risk severity and evaluations of the possible solutions to be applied. This document is made available to the project team, the project sponsor and decision makers.

Self-awareness Conscious knowledge of one's own character and feelings.

Self-managing Able to work on their own and possibly understand differences in culture.

Self-starters People who are sufficiently motivated or ambitious to work on their own initiative without needing direction.

Situational variables Factors in the environment that can unintentionally affect the results of a study.

Staffing plan Defines the amount and skill-level of human resources necessary to complete the project.

Stakeholder A person with an interest or concern in something, especially a business.

Steward Someone who looks after something responsibly.

Strategic fit The degree to which an organisation is matching its resources and capabilities with the opportunities in the external environment.

Synchronous Existing or occurring at the same time.

Synergies The interaction or co-operation of two or more organisations, substances, or other agents to produce a combined effect greater than the sum of their separate effects.

Systems thinking Notion of treating the organisation as a complex system composed of smaller (often complex) systems.

Tangible Perceptible by touch.

Teamwork theory An organised way of comprehending certain circumstances, procedures and behaviours relating to teams and teamwork.

Threats External conditions that could damage the project.

Traits Distinguishable qualities or characteristics, typically belonging to a person.

Unit-rate contract Type of contract based on estimated quantities of items included in the project and unit prices (hourly rates, rate per unit work volume, etc.).

Values Important and lasting beliefs or ideals shared by the members of a culture about *what is* good or bad and desirable or undesirable.

Virtual team Refers to a group of individuals who work together from different geographic locations, and rely on communication technology to collaborate.