FAKULTA SOCIÁLNÍCH STUDIÍ
Masarykova univerzita

Projects in an International Context

Student Guide

PRINCE2®
TRAINING ORGANIZATION ACCREDITED BY
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Message to Students

Welcome to the Masaryk University, Faculty of Social Studies, Projects *in an International Context* Course. This course is based on the 2017 version of PRINCE2® and is designed to teach you the fundamentals of the method.

PRINCE2, _Projects_ _in_ _a_ _Controlled_ _Environment_ _2_nd *version*, is an industry recognised, structured, project management methodology which is recognised worldwide. It was first released in 1989 and is a product-based approach to project management, providing an easily tailored method for the management of all types of projects in all domains.

Our goal is to provide the best training possible in project and programme management. To that end, our lecturers are not only faculty members of the University but are also highly respected industry professionals with extensive, international, project and programme management experience. This proficiency is an invaluable asset when it comes to explaining how the PRINCE2 method is used in some of the most challenging project environments.

We thank you for choosing to take this course here at the, Faculty. We strive to deliver the best learning experience possible and trust that you will find your time with us enlightening and rewarding.

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Section I - Document Control Section

DOCUMENT HISTORY

This document is only valid at the moment it was printed. The source document is under configuration management control and can be viewed on-line through the Masaryk University Information System. Only those printed copies distributed under configuration control and documented in the Document Distribution Section below are deemed valid after printing up until recalled by the course sponsor.

REFERENCES

A. Axelos, 2017. *Managing Successful Projects with PRINCE2®*. 2017 Edition. The Stationery Office

B. PeopleCert PRINCE2-2017_Edition_FOUNDATION_EN_CEW

PRODUCT IDENTIFIER

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Revision Date	Summary of Changes	Version
15/11/2017	Original Version	01

DOCUMENT REVIEW

Name	Signature	Date	Version
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DOCUMENT APPROVAL

Name	Signature	Date	Version

Section II - Course Details

1   COURSE MATERIALS

The course materials consist of this student guide, and the *Managing Successful Projects with PRINCE2® 2017 Edition Manual*. The manual is an invaluable tool in understanding the PRINCE2 method; all of the learning materials contained in this guide are either taken from or derived from the manual. At the end of the manual, there is a comprehensive glossary. It is highly recommended that you review the glossary regularly to familiarize yourself with the PRINCE2 terminology. The manual is also a very useful resource when doing the seminar exercises contained in this guide.

2   COURSE OBJECTIVES

The main objective of this course is to provide students with an understanding of the structure and key terminology of the method. This includes creating an understanding of the need for project management and how PRINCE2 meets this need. Upon completion of the course, students will be familiar with the characteristics and context of a project and the benefits of adopting PRINCE2. They will understand the purpose of the PRINCE2 roles, management products, themes, and principles, and they will be aware of what decisions the project manager is expected to make. Lastly, they will be fully versed in the purpose, objectives and context of the PRINCE2 processes and be well prepared to take the PRINCE2 Foundation Certification Examination.

3   FOUNDATION CERTIFICATION EXAM

The Foundation professional qualification confirms that an individual has sufficient knowledge and understanding of the PRINCE2 method to be able to work effectively with, or as a member of, a project management team working within an environment supporting PRINCE2. It is also a pre-requisite for the Practitioner qualification.

To be awarded the Foundation qualification, an individual must pass the Foundation exam. The objective of the examination is to enable delegates to demonstrate an understanding of the PRINCE2 principles, processes, themes, techniques and roles. The examination paper consists of 60 questions. Each question is worth 1 mark and the passing grade is 55%. This equates to 33 correct answers out of 60 questions.

It is always best to answer all the questions as marks are **not** subtracted for incorrect answers. It is important to note that there will only ever be **one answer** to each question; if you select more than one answer, no marks can be given for that question.

For those who wish to attempt the external certification examination, it will be administered through the Masaryk University Project Management Centre of Excellence. This is a fee-based exam and is not, in any way, part of the course requirements. The exam is by invitation only. Invitations will be extended to any students achieving a grade of 80% or better in this course.

4   COURSE SCHEDULE

****SEE THE COURSE SCHEDULE DOCUMENT IN THE IS COURSE MATERIALS SECTION FOR SPECIFIC LECTURE AND SEMINAR DATES****

5   REQUIRED READING

Textbook: *Managing Successful Projects with PRINCE2® 2017 Edition Manual*. Available at: https://is.muni.cz/obchod/baleni/105111

Lecture / Seminar	Required Reading Prior to Class
Prior to Lecture 1	Read sections I through III of the Student Guide posted in the IS. Read pages 3 to 40 of Managing Successful Projects
Lecture 2	Read pages 41 to 76, plus Appendix A.1 and A.2, Managing Successful Projects
Lecture 3	Read pages 77 to 92, Appendix A17, A.22, A.23, A.21, of Managing Successful Projects
Lecture 4	Read pages 93 to 118, 349 to 356 of Managing Successful Projects, and A.16, A.17, A.21.
Lecture 5	Read Pages 119 to 136 of Managing Successful Projects and Appendix A.24, Risk Management Approach, A.25, Risk Register
Lecture 6	Read pages 137 to 146 of Managing Successful Projects and Appendices: A.6, Configuration Item Records A.3, Change Control Approach A.12, Issue Register A.13, Issue Report A.18, Product Status Account
Lecture 7	Read pages 120 to 136 of Managing Successful Projects and Appendices: A.24, Risk Management Approach A.25, Risk Register
Seminar 1	Read the case study in the Student Case Book. Download the book from the IS and print it prior to the first seminar. Read pages 157 to 194 of Managing Successful Projects, and Appendices: A.2, Business Case A.7, Daily Log A.14, Lessons Log A.16, Plans A.21, Project Product Description A.19, Project Brief **Do exercises 1 and 2 in the exercise book and be prepared to discuss in seminar 1**.
Seminar 2	Memorize the composition section of Appendix A.19, Project Brief. **Do exercise 3 in the exercise book and be prepared to discuss in seminar.**
Seminar 3	Read Pages 195 to 214 of Managing Successful Projects plus Appendices: A.20, Project Initiation Documentation A.5, Communication Management Approach

Lecture / Seminar	Required Reading Prior to Class
	A.3, Change Control Approach A.22, Quality Management Approach A.24, Risk Management Approach A.16, Plans A.2, Business Case A.1, Benefits Management Approach **Do exercise 4 in the exercise book and be prepared to discuss in seminar.**
Seminar 4	Memorize the composition section of each document in the PID and the PID itself.
Seminar 5	**Do exercise 6 in the exercise book and be prepared to discuss in seminar.** Read pages 216 to 258 of Managing Successful Projects and Appendices: A.4, Checkpoint Report A.12, Issue Register A.6, Configuration Item Records A.13, Issue Report A.7, Daily Log A.14, Lessons Log A.9, End Stage Report A.23, Quality Register A.10, Exception Report A.25, Risk Register A.11, Highlight Report A.26, Work Package
Seminar 07	Read pages 260 to 270 of Managing Successful Projects and Appendix A.8, End Project Report. **Do exercise 8 in the exercise book and be prepared to discuss in seminar**
Seminar 08	Read about premature closure and review log, register and document creation exercises.
Seminar 09	Review all readings and exercises. Prepare for the exam.

6   GRADING

Type	Description	Duration	(%)
Graded Activity 1	Project Initiation Documentation	60 min	10
Graded Activity 2	Delivery Stage Activities	60 min	15
Graded Activity 3	Closure	60 min	15
Exam	Foundation Exam	60 min	60

Section III - Pre-course Reading and Instructions

1   INTRODUCTION TO PRINCE2

PRINCE2 (Projects in a Controlled Environment) is a structured project management method based on experience drawn from thousands of projects – and from the contributions of countless project sponsors, Project Managers, project teams, academics, trainers and consultants. This manual is designed:

- For entry-level project management personnel wishing to learn about project management generally and the PRINCE2 method in particular.
- For experienced Project Managers and personnel who wish to learn about the PRINCE2 method.
- As a detailed reference source for PRINCE2 practitioners.
- As a source of information on PRINCE2 for managers considering whether to adopt the method.

The manual covers the questions frequently asked by people involved in project management and support roles. These questions include:

- What is expected of me?
- What does the Project Manager do?
- What do I do if things don't go to plan?
- What decisions am I expected to make?
- What information do I need, or must I supply?
- Who should I look to for support? For direction?
- How can I tailor the use of PRINCE2 for my project?

1.1   *The importance of projects*

A key challenge for organizations in today's world is to succeed in balancing two parallel, competing imperatives:

- To maintain current business operations – profitability, service quality, customer relationships, brand loyalty, productivity, market confidence etc. What we term 'business as usual.'
- To transform business operations in order to survive and compete in the future – looking forward and deciding how business change can be introduced to best effect for the organization.

As the pace of change (technology, business, social, regulatory etc.) accelerates, and the penalties of failing to adapt to change become more evident, the focus of management attention is inevitably moving to achieve a balance between business as usual and business change.

Projects are the means by which we introduce change – and, while many of the skills required are the same, there are some crucial differences between managing business as usual and managing project work.

1.2   What makes projects different?

"A project is a temporary organization that is created for the purpose of delivering one or more business products according to an agreed Business Case."

There are a number of characteristics of project work that distinguish it from business as usual:

- Change Projects are the means by which we introduce change.
- Projects are temporary in nature. Once the desired change has been implemented, business as usual resumes (in its new form) and the need for the project is removed. Projects should have a defined start and a defined end.
- Cross-functional Projects involve a team of people with different skills working together (on a temporary basis) to introduce a change that will impact others outside the team. Projects often cross the normal functional divisions within an organization and sometimes span entirely different organizations. This frequently causes stresses and strains both within organizations and between, for example, customers and suppliers. Each has a different perspective and motivation for getting involved in the change.
- Every project is unique. An organization may undertake many similar projects, and establish a familiar, proven pattern of project activity, but each one will be unique in some way: a different team, a different customer, a different location. All these factors combine to make every project unique.
- The characteristics already listed will introduce threats and opportunities over and above those we typically encounter in the course of business as usual; projects are more risky.

1.3   Why have a project management method?

Project management is the planning, delegating, monitoring and control of all aspects of the project, and the motivation of those involved, to achieve the project objectives within the expected performance targets for time, cost, quality, scope, benefits and risks.

It is the development of the project's deliverables (known as products in PRINCE2) that deliver the project's results. A new house is completed by creating drawings, foundations, floors, walls, windows, a roof, plumbing, wiring and connected services. None of this is project management – so why do we need project management at all? The purpose of project management is to keep control over the specialist work required to create the project's products or, to continue with the house analogy, to make sure the roofing contractor does not arrive before the walls are built.

Additionally, given that projects are the means by which we introduce business change, and that project work entails a higher degree of risk than other business activity, it follows that implementing a secure, consistent, well-proven approach to project management is a valuable business investment.

1.4   Introducing PRINCE2

PRINCE2 is a non-proprietary method and has emerged worldwide as one of the most widely accepted methods for managing projects. This is largely due to the fact that PRINCE2 is truly generic: it can be applied to any project regardless of project scale, type, organization, geography or culture.

PRINCE2 achieves this by isolating the management aspects of project work from the specialist contributions, such as design, construction etc. Regardless of the product delivery method, waterfall or agile, the specialist aspects of any type of project are easily integrated with the PRINCE2 method and, used alongside PRINCE2, provide a secure overall framework for the project work.

Because PRINCE2 is generic and based on proven principles, organizations adopting the method as a standard can substantially improve their organizational capability and maturity across multiple areas of business activity – business change, construction, IT, mergers and acquisitions, research, product development and so on.

In order to achieve control over anything, there must be a plan. It is the Project Manager who plans the sequence of activities to build the house, works out how many bricklayers will be required and so on.

It may be possible to build the house yourself – but being a manager implies that you will delegate some or all of the work to others. The ability to delegate is important in any form of management but particularly so (because of the cross-functionality and risks) in project management.

With the delegated work under way, the aim is that it should 'go according to plan', but we cannot rely on this always being the case. It is the Project Manager's responsibility to monitor how well the work in progress matches the plan.

Of course, if work does not go according to plan, the Project Manager has to do something about it, for example, exert control. Even if the work is going well, the Project Manager may spot an opportunity to speed it up or reduce costs. Whether it is by taking corrective action or implementing measures to improve performance, the aim of PRINCE2 is to make the right information available at the right time for the right people to make the right decisions.
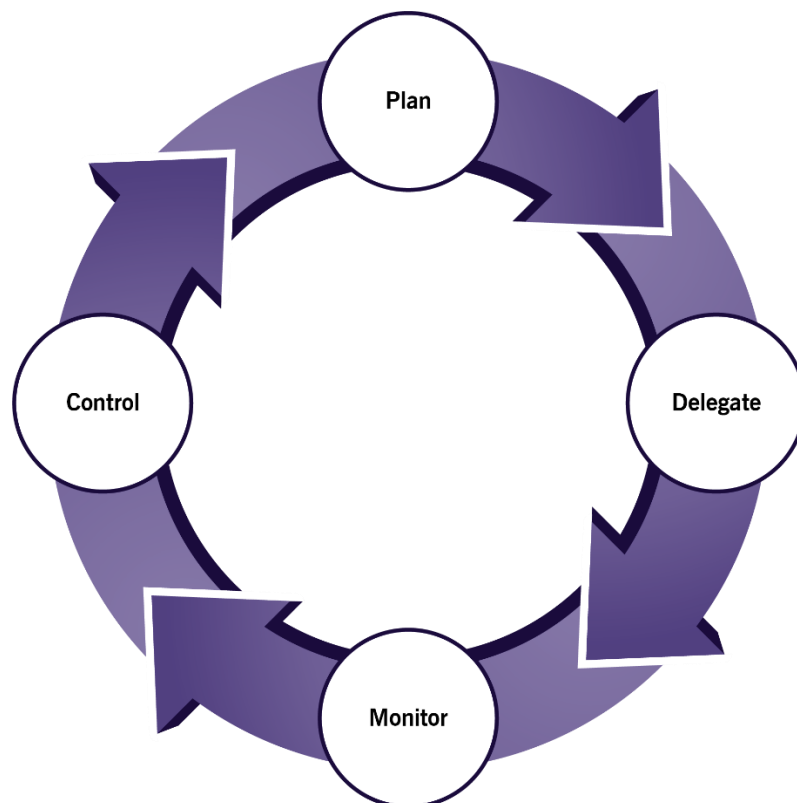
There are six variables involved in any project, and therefore six aspects of project performance to be managed:

- **Costs**: The project has to be affordable and, though we may start out with a particular budget in mind, there will be many factors which can lead to overspending and, perhaps, some opportunities to cut costs.
- **Timescales**: Allied to this, and probably the next most-frequent question asked of a Project Manager, is: 'When will it be finished?'
- **Quality**: Finishing on time and within budget is not much consolation if the result of the project does not work. In PRINCE2 terms, the project's products must be fit for purpose.
- **Scope**: Exactly what will the project deliver? Without knowing it, the various parties involved in a project can very often be talking at cross-purposes about this. The customer may assume that, for instance, a fitted kitchen and/or bathroom is included in the price of the house, whereas the supplier views these as 'extras'. On large-scale projects, scope definition is much more subtle and complex. There must be agreement on the project's scope, and the Project Manager needs to have a detailed understanding of what is and what is not within the scope. The Project Manager should take care not to deliver beyond the scope as this is a common source of delays, overspends and uncontrolled change ('scope creep').
- **Risk**: All projects entail risks, but exactly how much risk are we prepared to accept? Should we build the house near the site of a disused mine, which may be prone to subsidence? If we decide to go ahead, is there something we can do about the risk? Maybe insure against it or have thorough surveys carried out?
- **Benefits**: Perhaps most often overlooked is the question, 'Why are we doing this?' It is not enough to build the house successfully on time, within budget and to quality specifications if, in the end, we cannot sell or rent it at a profit or live in it happily. The Project Manager has to have a clear understanding of the purpose of the project as an investment and make sure that what the project delivers is consistent with achieving the desired return.

PRINCE2 is an integrated framework of processes and themes that addresses the planning, delegation, monitoring and control of all these six aspects of project performance.

The PRINCE2 method addresses project management with four integrated elements of principles, themes, processes and the project environment.
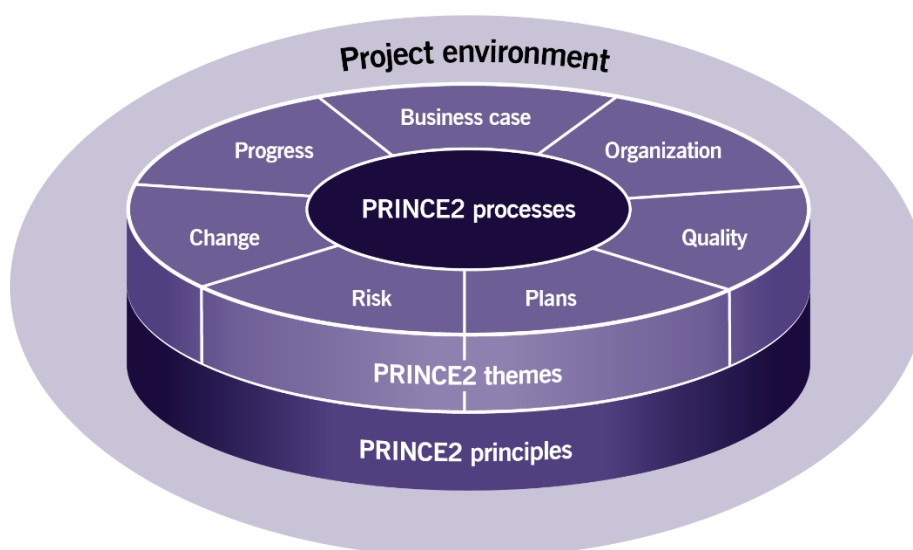
The principles are the guiding obligations and good practices which determine whether the project is genuinely being managed using PRINCE2. There are seven principles, and unless all of them are applied, it is not a PRINCE2 project.

The themes describe aspects of project management that must be addressed continually and in parallel throughout the project. The seven themes explain the specific treatment required by PRINCE2 for various project management disciplines, and why they are necessary.

The processes describe a step-wise progression through the project lifecycle, from getting started to project closure. Each process provides checklists of recommended activities, products and related responsibilities.

Tailoring PRINCE2 to the project environment addresses the need to tailor PRINCE2 to the specific context of the project. PRINCE2 is not a 'one size fits all' solution; it is a flexible framework that can readily be tailored to any type or size of project.

It is not intended (or possible) for PRINCE2 to cover every aspect of project management. There are three broad topic categories which are deliberately considered to be outside the scope of PRINCE2:

- **Specialist aspects.** PRINCE2's strength is in its wide applicability – it is entirely generic. Consequently, industry-specific or type-specific activity is excluded. Engineering models, project lifecycles or specific techniques (such as organizational change management or procurement) can readily be used alongside PRINCE2. PRINCE2 categorizes all of these aspects of project work as 'specialist' (which means that the specialist products concerned need to be identified and included within project scope and plans).
- **Detailed techniques.** There are many proven planning and control techniques that can be used in support of the PRINCE2 themes. Examples are critical path analysis (in planning) and earned value analysis (in progress control). Such techniques are well documented elsewhere. Only techniques that have a specific PRINCE2 approach are described, e.g. the product-based planning and quality review techniques.
- **Leadership capability.** Leadership, motivational skills and other interpersonal skills are immensely important in project management but impossible to codify in a method. Leadership styles vary considerably, and a style that works in one situation may be entirely inappropriate in another. The fact that it is easy to think of successful leaders who have adopted very different styles – from autocratic to consensus-based – bears this out. For this reason, PRINCE2 cannot address this aspect of project management directly. There are many leadership models and interpersonal-skills training programmes that fulfil this requirement.

1.5   *Benefits of PRINCE2*

Before introducing the structure of the method, it is worthwhile reviewing the key benefits of adopting PRINCE2:

- PRINCE2 embodies established and proven best practice and governance for project management. It can be applied to any type of project – and can easily be implemented alongside specialist, industry-specific models ('engineering models' or 'development lifecycles').
- PRINCE2 is widely recognized and understood, and therefore provides a common vocabulary for all project participants – promoting effective communication.

- PRINCE2 provides for the explicit recognition of project responsibilities – so that participants understand each other's roles and needs. There is a defined structure for accountability, delegation, authority and communication.
- Its product focus clarifies (for all parties) what a project will deliver, why, when, by whom and for whom.
- PRINCE2 plans are carefully designed to meet the needs of the different levels in the management team, improving communication and control.
- It is based on a 'management by exception' framework, providing for the efficient and economic use of management time (whether at corporate, programme, Project Board or project management levels).
- PRINCE2 ensures that participants focus on the viability of the project in relation to its Business Case objectives – rather than simply seeing the completion of the project as an end in itself.
- It defines a thorough but economical structure of reports.
- It ensures that stakeholders (including sponsors and resource providers) are properly represented in planning and decision making.
- Adopting PRINCE2 promotes learning and continual improvement in organizations.
- PRINCE2 promotes consistency of project work and the ability to reuse project assets; it also facilitates staff mobility and reduces the impact of personnel changes/handovers.
- PRINCE2 is an invaluable diagnostic tool, facilitating the assurance and assessment of project work, troubleshooting and audits.
- There are scores of accredited training and consultancy organizations (ATOs and ACOs) operating worldwide, who can supply expert support for PRINCE2 projects or for organizations planning to adopt PRINCE2.

2   INTRODUCTION TO PRINCE2 PRINCIPLES

The purpose of PRINCE2 is to provide a project management method that can be applied regardless of project scale, type, organization, geography or culture. This is possible because PRINCE2 is principles-based.

Principles are characterized as:

- Universal in that they apply to every project.
- Self-validating in that they have been proven in practice over many years.
- Empowering because they give practitioners of the method added confidence and ability to influence and shape how the project will be managed.

The principles on which PRINCE2 is based originate from lessons learned from projects both good and bad. They provide a framework of good practice for those people involved in a project. If a project does not adhere to these principles, it is not being managed using PRINCE2, because the principles are the basis of what defines a PRINCE2 project.

The seven PRINCE2 principles can be summarized as:

- Continued business justification.
- Learn from experience.
- Defined roles and responsibilities.
- Manage by stages.
- Manage by exception.
- Focus on products.]

- Tailor to suit the project environment.

It is the adoption of these principles that characterizes whether a project is using PRINCE2; the adoption of processes and documents alone does not fully define its usage. The principles facilitate good use of PRINCE2 by ensuring that the method is not applied in an overly prescriptive way or in name only, but it is applied in a way that is sufficient to contribute to the success of the project.

2.1 Continued business justification

A PRINCE2 project has continued business justification.

A requirement for a PRINCE2 project is that:

- There is a justifiable reason to start it.
- The justification should remain valid throughout the life of the project.
- The justification is documented and approved.

In PRINCE2, the justification is documented in a Business Case. As a project is inextricably linked to its business justification, it drives the decision-making processes to ensure that the project remains aligned to the business objectives and benefits being sought.

Organizations that lack rigour in developing Business Cases may find that some projects proceed even where there are few real benefits, or where a project has only tentative associations with corporate strategy. Poor alignment with corporate strategies can also result in organizations having a portfolio of projects that have mutually inconsistent or duplicated objectives.

Even projects that are compulsory (for example, to comply with new legislation) require justification of the option chosen, as there may be several options available that yield different costs, benefits and risks.

Although the justification should remain valid, it may change. It is therefore important that the project and evolving justification remain consistent.

If, for whatever reason, the project can no longer be justified, the project should be stopped. Stopping a project in these circumstances is a positive contribution to an organization as its funds and resources can be reinvested in other more worthwhile projects.

2.2 Learn from experience

PRINCE2 project teams learn from previous experience: lessons are sought, recorded and acted upon throughout the life of the project.

Projects involve a temporary organization for a finite timescale for a specific business purpose. A common characteristic is that the project includes an element of uniqueness such that it cannot be managed by existing line management or functional units. It is this element of uniqueness that makes projects challenging as the temporary team may not have experience of a project like the one being undertaken.

In PRINCE2, learning from experience permeates the method:

- When **starting a project**: previous or similar projects should be reviewed to see if lessons learned could be applied. If the project is a 'first' for the people within the organization, then it is even more important to learn from others, and the project should consider seeking external experience.

- As the **project progresses**: the project should continue to learn. Lessons should be included in all reports and reviews. The goal is to seek opportunities to implement improvements during the life of the project.
- As the **project closes**: the project should pass on lessons. Unless lessons provoke change, they are only lessons identified (not learned).

It is the responsibility of everyone involved with the project to seek lessons learned rather than waiting for someone else to provide them.

2.3   Defined roles and responsibilities

A PRINCE2 project has defined and agreed roles and responsibilities within an organization structure that engages the business, user and supplier stakeholder interests.

Projects involve people; no amount of good planning or control will help if the wrong people are involved, if the right people are not involved, or if people involved do not know what's expected of them or what to expect of others.

A project is typically cross-functional, may involve more than one organization, and may involve a mixture of full-time and part-time resources. The management structures of the parties involved in the project are likely to be different – with different priorities, objectives and interests to protect. The day-to-day line management structures may not be designed for, or suited to, project work.

To be successful, projects must have an explicit project management team structure consisting of defined and agreed roles and responsibilities for the people involved in the project. This requires a means for effective communication between them.

All projects have the following primary stakeholders:

- '**Business**' sponsors who endorse the objectives and ensure that the business investment provides value for money.
- '**Users**' who, after the project is completed, will use the products to enable them to gain the intended benefits.
- '**Suppliers**' who provide the resources and expertise required by the project (these may be internal or external).

Therefore, all three stakeholder interests need to be represented effectively in the project management team – two out of three is not enough. If the project costs outweigh the benefits, the project will fail. Equally, if the outcome of the project does not meet the users' or operational needs, or cannot feasibly be delivered by the suppliers, failure is inevitable.

The defined project management team structure unites the various parties in the common aims of the project. For all those people involved, a defined project management team structure provides the answer to the question, 'What is expected of me?'

2.4   Manage by stages

A PRINCE2 project is planned, monitored and controlled on a stage-by-stage basis.

Management stages provide senior management with control points at major intervals throughout the project. At the end of each stage, the project's status should be assessed, the Business Case and plans reviewed to ensure that the project remains viable, and a decision made as to whether to proceed.

Breaking the project into a number of stages enables the extent of senior management control over projects to be varied according to the business priority, risk and complexity involved. Shorter stages offer more control, while longer stages reduce the burden on senior management.

Planning can only be done to a level of detail that is manageable and foreseeable. A great deal of effort can be wasted on attempts to plan beyond a sensible planning horizon. For example, a detailed plan to show what each team member is doing for the next 12 months will almost certainly be inaccurate after just a few weeks. A detailed Team Plan for the short term, and an outline plan for the long term is a more effective approach.

PRINCE2 overcomes the planning horizon issue by:

- Dividing the project into a number of management stages.
- Having a high-level Project Plan and a detailed Stage Plan (for the current stage).
- Planning, delegating, monitoring and controlling the project on a stage-by-stage basis.

PRINCE2 requires there to be a minimum of two management stages: one initiation stage and one or more further management stages.

2.5   *Manage by exception*

A PRINCE2 project has defined tolerances for each project objective to establish limits of delegated authority.

PRINCE2 enables appropriate governance by defining distinct responsibilities for directing, managing and delivering the project and clearly defining accountability at each level.

Accountability is established by:

- Delegating authority from one management level to the next by setting tolerances against six objectives for the respective level of the plan:
  - ➢ Time Plus or minus an amount of time on the target completion dates.
  - ➢ Cost Plus or minus an amount of the planned budget.
  - ➢ Quality Plus or minus degrees off a quality target (e.g. a product that weighs a target 300 g, with an allowed -5 g to +10 g tolerance).
  - ➢ Scope Permissible variation of the plan's products (e.g. mandatory requirements plus or minus desirable requirements).
  - ➢ Risk Limits on the plan's aggregated risks (e.g. cost of aggregated threats to remain less than 10% of the plan's budget) or limits on any individual threat (e.g. a threat to operational service).
  - ➢ Benefit Plus or minus degrees off an improvement goal (e.g. 30–40% cost reduction).
- Setting up controls so that if those tolerances are forecast to be exceeded, they are immediately referred up to the next management layer for a decision on how to proceed.
- Putting an assurance mechanism in place so that each management layer can be confident that such controls are effective.

This implementation of 'management by exception' provides for very efficient use of senior management time as it reduces senior managers' time burden without removing their control by ensuring decisions are made at the right level in the organization.

2.6   *Focus on products*

A PRINCE2 project focuses on the definition and delivery of products, in particular their quality requirements.

A successful project is output-oriented not activity-oriented. An output-oriented project is one that agrees and defines the project's products prior to undertaking the activities required to produce them. The set of agreed products defines the scope of a project and provides the basis for planning and control.

The purpose of a project is to fulfil stakeholder expectations in accordance with the business justification, and to do this, there must be a common understanding of the products required and the quality expectations for them. The purpose of a project can be interpreted in many different ways. To secure the project's meaning, there should be an explicit understanding of the products to be produced, and the criteria against which they will be individually approved should be specified.

A PRINCE2 project uses Product Descriptions to provide such clarity by defining each product's purpose, composition, derivation, format, quality criteria and quality method. They provide the means to determine effort estimates, resource requirements, dependencies and activity schedules.

The 'product focus' supports almost every aspect of PRINCE2: planning, responsibilities, status reporting, quality, change control, scope, product acceptance and risk management.

Without a product focus, projects are exposed to several major risks such as acceptance disputes, rework, uncontrolled change ('scope creep'), user dissatisfaction and underestimation of acceptance activities.

2.7   Tailor to suit the project environment

PRINCE2 is tailored to suit the project's environment, size, complexity, importance, capability and risk.

The value of PRINCE2 is that it is a universal project management method that can be applied regardless of project type, organization, geography or culture. It can be used by any project because the method is designed to be tailored to its specific needs.

If PRINCE2 is not tailored, it is unlikely that the project management effort and approach are appropriate for the needs of the project. This can lead to 'robotic' project management at one extreme (the method is followed without question) or 'heroic' project management at the other extreme (the method is not followed at all).

The purpose of tailoring is to:

- Ensure the project management method relates to the project's environment (e.g. aligning the method to the business processes that may govern and support the project, such as human resources, finance and procurement).
- Ensure that project controls are based on the project's scale, complexity, importance, capability and risk (e.g. the reporting and reviewing frequency and formality).

Tailoring requires the Project Manager and the Project Board to make an active decision on how the method will be applied, for which guidance is provided. When tailoring PRINCE2, it is important to remember that it requires information (not necessarily documents) and decisions (not necessarily meetings).

To ensure that all those people involved with the project understand how PRINCE2 is to be used, the Project Initiation Documentation should state how the method is being tailored for that particular project.

3   INTRODUCTION TO PRINCE2 THEMES

The PRINCE2 themes describe aspects of project management that must be addressed continually. Any Project Manager who gives thorough attention to these themes will fulfil the role in a professional manner.

However, the strength of PRINCE2 is the way in which the seven themes are integrated, and this is achieved because of the specific PRINCE2 treatment of each theme (i.e. they are carefully designed to link together effectively).

The PRINCE2 processes address the chronological flow of the project – with actions relating to different themes mixed together. Here, the logical thread that runs through each theme is highlighted, and more detailed guidance is provided in order to amplify the process activities. The following table taken from the manual lists the seven PRINCE2 themes and the relevant chapter.

Theme	Description	Answers the question	Chapter
Business case	The project starts with an idea which is considered to have potential value for the organization concerned. This theme addresses how the idea is developed into a viable investment proposition for the organization and how project management maintains the focus on the organization's objectives throughout the project.	Why?	6
Organization	The organization commissioning the project needs to allocate the work to managers who will be responsible for it and steer it through to completion. Projects are cross-functional so the normal line function structures are not suitable. This theme describes the roles and responsibilities in the temporary PRINCE2 project management team required to manage the project effectively.	Who?	7
Quality	The initial idea will only be understood as a broad outline. This theme explains how the outline is developed so that all participants understand the quality attributes of the products to be delivered and then how project management will ensure that these requirements are subsequently delivered.	What?	8
Plans	PRINCE2 projects proceed on the basis of a series of approved plans. This theme complements the quality theme by describing the steps required to develop plans and the PRINCE2 techniques that should be applied. In PRINCE2, the plans are matched to the needs of the personnel at the various levels of the organization. They are the focus for communication and control throughout the project.	How? How much? When?	9
Risk	Projects typically entail more risk than stable operational activity. This theme addresses how project management manages uncertainty.	What if?	10
Change	This theme describes how project management assesses and acts upon issues which have a potential impact on any of the baseline aspects of the project (its plans and completed products). Issues may be unanticipated general problems, requests for change or instances of a product not meeting its specification.	What is the impact?	11
Progress	This theme addresses the ongoing viability of the plans. The theme explains the decision-making process for approving plans, the monitoring of actual performance and the escalation process if events do not go according to plan. Ultimately, the progress theme determines whether and how the project should proceed.	Where are we now? Where are we going? Should we carry on?	12

3.1   Applying the themes

All seven themes must be applied in a project, but they should be tailored according to the scale, nature and complexity of the project concerned.

Themes can be tailored 'up' or 'down'. That is to say, additional detailed documentation and process discipline can be introduced for complex or high-risk projects, whereas concise bullet-point presentations and more informal processes may be adequate for simple, low-risk projects.

4   INTRODUCTION TO PRINCE2 PROCESSES

PRINCE2 is a process-based approach for project management. A process is a structured set of activities designed to accomplish a specific objective. It takes one or more defined inputs and turns them into defined outputs.

There are seven processes in PRINCE2, which provide the set of activities required to direct, manage and deliver a project successfully. The figure below shows how each process is used throughout a project's life.
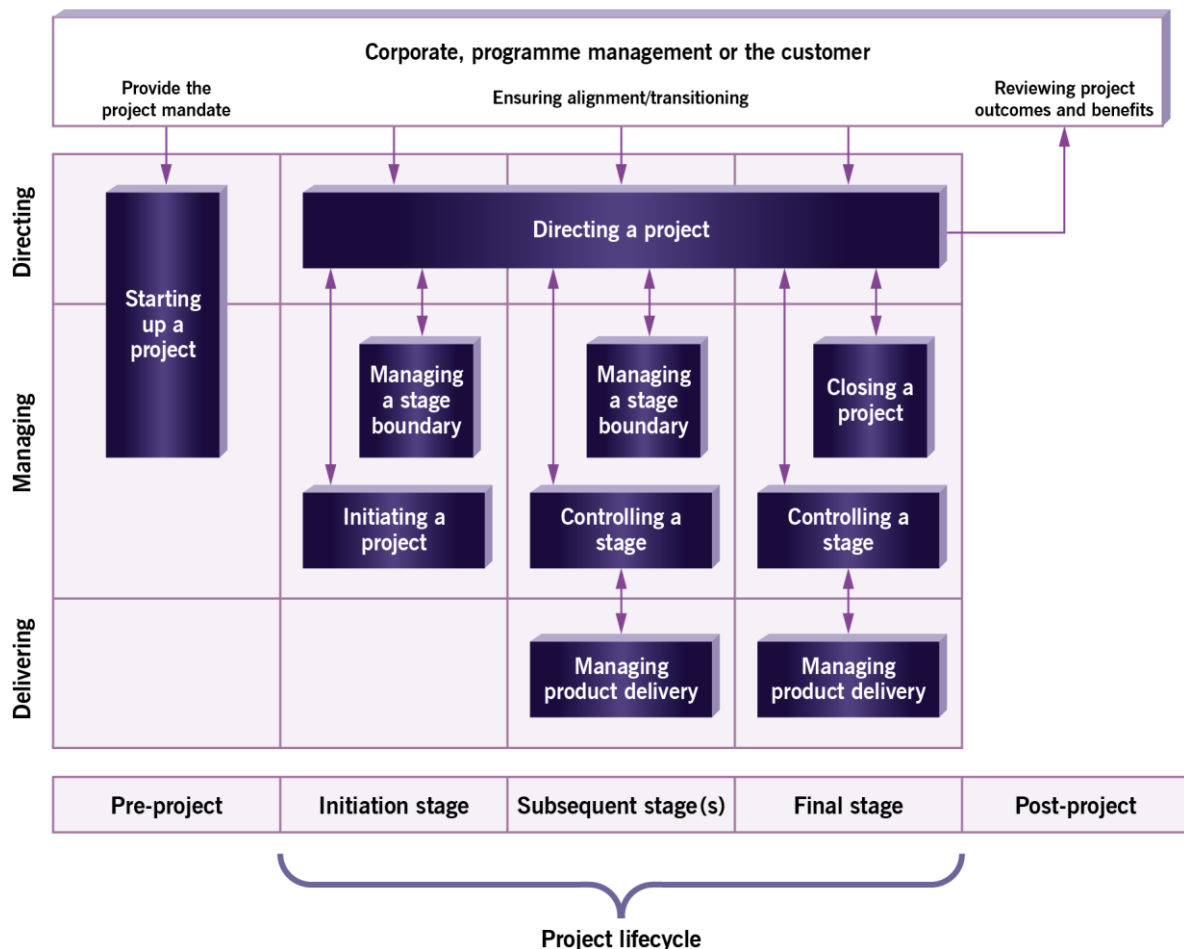
The Project Board sets direction and makes key decisions throughout the life of the project. The Project Board's activities are covered by the Directing a Project process (Chapter 13), which runs from pre-project through to, and including, the final stage.

4.1   Pre-project

In the beginning, someone has an idea or a need. This may result from new business objectives, responding to competitive pressures, changes in legislation, or a recommendation in a report or an audit. The trigger for the project could be almost anything. In PRINCE2, this trigger is called a project mandate. The project mandate is provided by the commissioning organization (corporate, programme management or customer) and can vary in form from a verbal instruction to a well-defined and justified project definition.

Prior to the activity to fully scope the project, it is important to verify that the project is worthwhile and viable. Such activities are covered by the process Starting up a Project, which culminates in the production of a Project Brief and a Stage Plan for project initiation.

The Project Board reviews the Project Brief and decides whether to initiate the project. They then state the levels of authority to be delegated to the Project Manager for the initiation stage.

4.2   Initiation stage

Once there is a decision that approves the project, it needs to be planned in detail. Funding needs to be obtained, and controls should be defined to ensure that the project proceeds in accordance with the wishes of those who are paying for the process and those who are making use of the final products. The detailed planning, establishment of how the project will be managed and controls, development of a robust Business Case, and a means of managing benefits are covered by the Initiating a Project process. Also, during the initiation stage, the Managing a Stage Boundary process is used to plan the next stage in detail.

The initiation stage culminates in the production of the Project Initiation Documentation, which is reviewed by the Project Board to decide whether to authorize the project. As the contents of the Project Initiation Documentation are likely to change throughout the project (under change control), this version of the Project Initiation Documentation is preserved as input for later performance reviews.

4.3   Subsequent delivery stages

The Project Board delegates day-to-day control to the Project Manager on a stage-by-stage basis. The Project Manager needs to assign work to be done, ensure that the outputs of such work (products) meet relevant specifications, and gain suitable approval where appropriate. The Project Manager also needs to ensure that progress is in line with the approved plan and that the forecasts for the project's performance targets are within agreed tolerances. The Project Manager ensures that a set of project records (Daily Log, Lessons Log, Issue Register, Risk Register, Quality Register and Configuration Item Records) are maintained to assist with progress control. The Project Manager informs the Project Board of progress through regular Highlight Reports. The activities to control each stage are covered by the Controlling a Stage process.

In the Managing Product Delivery process, the Team Manager(s) or team members execute assigned Work Packages (that will deliver one or more products) and keep the Project Manager appraised of progress via Checkpoint Reports.

Towards the end of each management stage, the Project Manager requests permission to proceed to the next stage by reporting how the stage performed, providing an update to the Business Case and planning the next management stage in detail. The Project Manager provides the information needed by the Project Board in order for it to assess the continuing viability of the project and to make a decision to authorize the next management stage. The activities to manage each stage boundary are covered in the Managing a Stage Boundary process.

4.4   Final delivery stage

As a project is a temporary undertaking, during the final stage (once the Project Manager has gained approval for all of the project's products) it is time to decommission the project. The Project Board needs to be satisfied that the recipients of the project's products are in a position to own and use them on an ongoing basis. Should this be the case, the products can be transitioned into operational use and the project can close. The project documentation should be tidied up and archived; it should be assessed for performance against its original plan, and the resources assigned to the project need to be released. The closure activities include planning post-project benefits management to take place for those benefits that can only be assessed after the products

have been in use (and therefore after the project has closed). The activities to decommission a project are covered by the Closing a Project process.

The PRINCE2 process model is shown on the next page.

The processes are aligned to the management levels of corporate or programme, directing, managing and delivering. The triggers between each process are shown.

Section IV - Course Slides

Projects in an International Context Course Slides

PEOPLECERT
P A R T N E R

PRINCE2®
TRAINING ORGANIZATION ACCREDITED BY
PEOPLECERT ON BEHALF OF **AXELOS**

2

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Course Objectives

- Understand the need for project management and how PRINCE2 meets that requirement.
- Understand the principles, themes, and processes of PRINCE2.
- Be prepared if things don't go to plan.
- Be aware of what decisions the project manager is expected to make.
- Understand information needs within a project.
- Comprehend the purpose of the PRINCE2 roles and management products.
- Understand the need to tailor PRINCE2 to your project.
- Be prepared to take a Foundation Certification Examination.

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Foundation Exam

- The PRINCE2® Foundation Certification is suitable for individuals who want to demonstrate they have sufficient understanding of the PRINCE2 methodology and can work effectively as part of a team or with a project management team within a PRINCE2 supporting environment.
- The Foundation Certificate is a pre-requisite for individuals wishing to achieve the PRINCE2 Practitioner Qualification.
- The exam format is as follows:
  - Pass Mark: 55% (33 out of 60 questions)
  - Exam duration: 60 minutes (+25% for non-native English speakers)
  - Closed book

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Lecture 1

- Why We Need Project Management
- Introduction to PRINCE2
- Introduction to PRINCE2 Process Lifecycle
- Tailoring PRINCE2

Definition of a Project

'A project is a temporary organisation that is created for the purpose of delivering one or more business products according to an agreed business case.' (Axelos, 2017, p.8)

- **Change** Projects are the means by which we introduce change.
- **Temporary** Projects are temporary in nature. When the desired change has been implemented, business as usual resumes in its new form and the need for the project is removed. Projects have a defined start and a defined end.
- **Cross-functional** A project involves people with different skills working together to introduce a change that will impact others outside the team.
- **Unique** Every project is unique.
- **Uncertainty** Projects have threats and opportunities over and above those typically encountered in the course of business as usual. Projects are more risky.

WHY WE NEED PROJECT MANAGEMENT

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SNCF / RFF, France

€68 million with approximately 1,000 stations left to modify

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Brandenburg Airport, Berlin, Germany

From €1.2 billion to approximately €5 billion
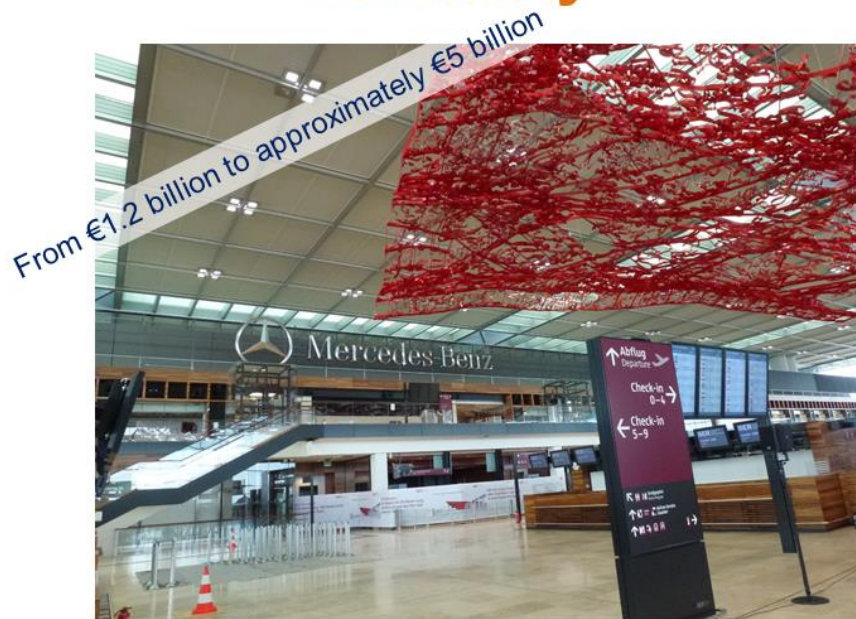
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NATO HQ, Brussels, Belgium

Over 10 years behind, over double the cost

Masaryk University

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Why Projects Fail

- Lack of project justification, no valid business case.
- Insufficient attention to quality from the start and through development.
- Poorly defined outcomes, confusion over what the project needs to achieve.
- Lack of communication amongst stakeholders.
- Poorly defined roles and responsibilities amongst project personnel.
- Poor cost and time estimating.
- Poor planning and resource coordination.
- Insufficient measurables and lack of progress control.
- Lack of quality control.

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Minimizing Failure Risks

- Use certified professional project managers or personnel trained in project management.

- Adopt a proven, recognised project management methodology.

- Top two internationally recognised best practices/methodologies/certifications:
  - Projects IN Controlled Environments (PRINCE2®); and
  - PMBoK - Project Management Institute (PMI)

- This course will focus on the PRINCE2® method.

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INTRODUCTION TO PRINCE2®

PRINCE2 Features

- PRINCE2 is an internationally recognised structured project management methodology.
- Based on experience drawn from thousands of projects and the contributions of industry professionals, project teams, academics, trainers and consultants.
- Generic in nature and non-industry specific.
- Through tailoring, can be applied to any project regardless of project scale, type, organization, geography or culture.
- Separates the management of project work from the specialist work and specialist delivery methods.
- Specialist aspects of any type of project are easily integrated with the PRINCE2 method.

PRINCE2 Benefits

- Provides standardised, defined PM terminology.
- Promotes consistency of project work and the ability to reuse project assets.
- Facilitates staff mobility and reduces the impact of personnel changes or handovers.
- Ensures that participants focus on the viability of the project in relation to its business case objectives.
- Ensures that stakeholders are properly represented in planning and decision-making.
- Promotes learning from project experience and continual improvement in organizations.
- Adopting the method as a standard can substantially improve organizational capability and maturity across multiple areas of business activity.

Outside the scope of PRINCE2

- Specialist aspects
- Detailed techniques
- Leadership styles and capability

PRINCE2 Structure

- Four integrated elements make up the PRINCE2 Structure:
  - 7 Principles comprised of obligations and best practices.
  - 7 aspects of project management defined as themes to be addressed continually and in parallel throughout the project.
  - 7 PRINCE2 processes address the chronological flow of the project through its lifecycle intertwined with actions pertaining to various themes.
  - Tailored or scaled to meet the Project environment.

7 Principles

- Continued Business Justification
- Learn From Experience
- Defined Roles And Responsibilities
- Manage By Stages
- Manage By Exception
- Focus On Products
- Tailor To Suit The Project Environment

7 Themes

- Business Case
- Organisation
- Quality
- Plans
- Risk
- Change
- Progress

7 Processes

- Starting up a project
- Initiating a project
- Directing a project
- Managing a stage boundary
- Controlling a stage
- Managing product delivery
- Closing a project

Structure Diagram

(Figure 1.1 Managing Successful Projects with PRINCE2® 2017 edition).

Definition of Project Management

'**Project Management** is the planning, delegating, monitoring and controlling of all aspects of the project, and the motivation of those involved, to achieve the project objectives within the expected performance targets for time, cost, quality, scope, benefits, and risks.' (Axelos, 2017, p. 9)

Project Management
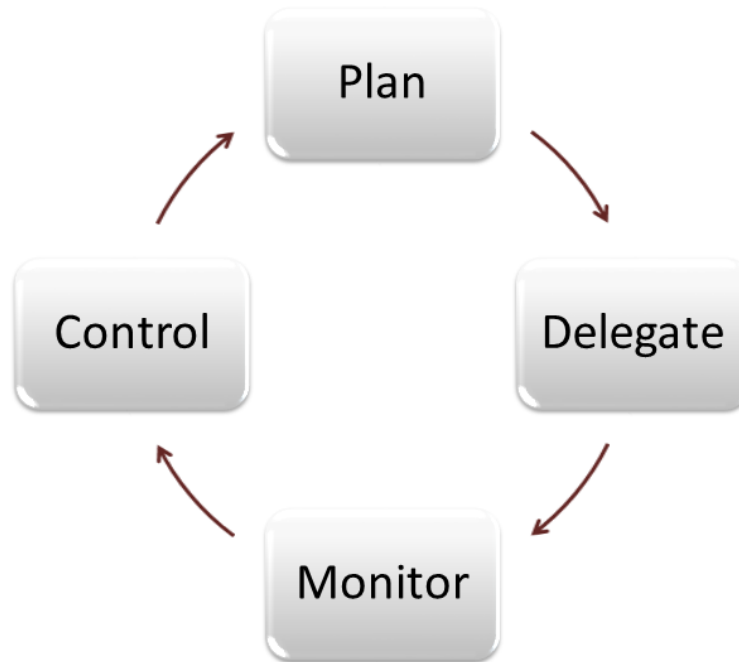
6 Aspects to be Managed

- Timescales
- Cost
- Quality
- Scope
- Risk
- Benefits

What Makes a PRINCE2 Project

- PINO vs PRINCE2
- At a minimum it must be possible to demonstrate that the project:
  – is applying PRINCE2's principles
  – is meeting the minimum requirements set out in the PRINCE2 themes
  – has project processes that satisfy the purpose and objectives of the PRINCE2 processes
  – is either using PRINCE2's recommended techniques or using alternative, equivalent techniques.

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Projects in Context

- PRINCE2 is based on a Customer/ Supplier Environment.
- PRINCE2 assumes that there will be a customer who will specify the desired result and a supplier who will provide the resources and skills to deliver that result.
- 'Corporate, programme management or the customer' is the organization that commissions a project.
- The supplier is the entity responsible for the supply of the project's specialist products.

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Projects, Programme, Portfolio

- Stand-alone Projects
- Projects within Programmes
- Projects within a Portfolio
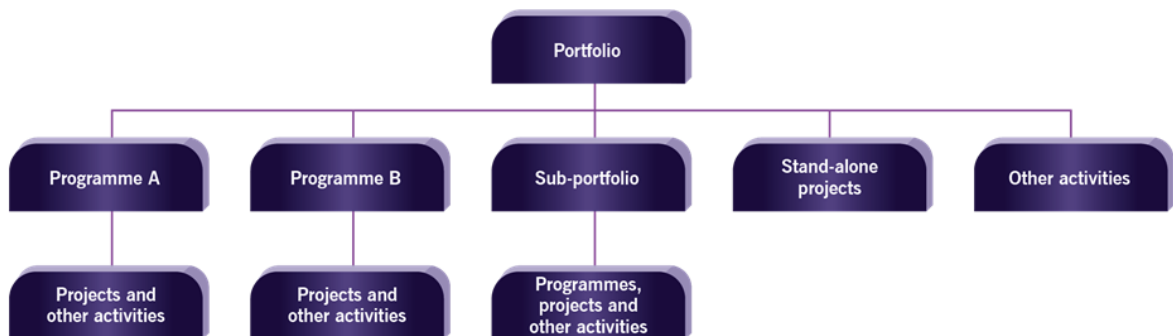
(Figure 2.2 Managing Successful Projects with PRINCE2® 2017 edition).

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Projects in Commercial Environments

- Often hierarchies of commercial relationships
- Potentially multiple sets of:
  - reasons for undertaking the project (business case)
  - management systems (including project management methods)
  - governance (possibly requiring disclosure of different sorts of project data at different points in the project's life)
  - organization structures, delivery approaches, corporate cultures.

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INTRODUCTION TO THE PRINCE2 PRINCIPLES

Principles Overview

- PRINCE2 is Principle-based rather than prescriptive.

- Universal in that they apply to every project.

- Self-validating in that they have been proven in practice over many years.

- Empowering because they give practitioners added confidence and ability to influence and shape how the project will be managed.

The 7 Principles

To be following PRINCE2, these principles must be adopted when managing a project.

- Continued business justification
- Learn from experience
- Defined roles and responsibilities
- Manage by stages
- Manage by exception
- Focus on products
- Tailor to suit the project

TAILORING PRINCE2

Tailoring PRINCE2

- Principle 7: Tailor to suit the Project.
- Tailoring ensures a level of project management that does not overburden the project management team.
- Ensures an appropriate level of governance, planning and control, at an acceptable level of risk.
- If an organization does not have its own project management method, tailoring will be done directly from the PRINCE2 manual.
- If an organization has its own PRINCE2-based project management method (embedded), this will be tailored to suit the project.

What Can be Tailored

- Processes may be combined or adapted.
- Themes can be applied using techniques appropriate to the project.
- Roles may be combined or split if accountability is maintained and there are no conflicts of interest.
- Management products may be combined or split and should take the form most appropriate to the project and its environment.
- Terminology may be changed to accommodate other standards or policies, provided it is applied consistently.

Tailoring

- The project manager is responsible for identifying and documenting the level of tailoring for the project.
- Tailoring is documented as part of the PID.
- The PID is reviewed by the appropriate stakeholders and approved by the project board.
- Project assurance, project support roles or a centre of excellence may advise the project board and the project manager on how to tailor.
- Team managers may suggest any tailoring which would help them manage their work packages more effectively.

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Lecture 2

- PRINCE2 Themes
- Business Case Theme
- Organisation Theme

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INTRODUCTION TO THE PRINCE2 THEMES

Overview of Themes

- The themes describe aspects of project management that must be addressed continually as the project progresses through its lifecycle.

- The strength of PRINCE2 is the way in which the seven themes are carefully designed to link together effectively.

- The processes address the chronological flow of the project, with actions relating to different themes mixed together.

7 Themes

- Business Case
- Organisation
- Quality
- Plans
- Risk
- Change
- Progress

Tailoring the Themes

- Tailoring may range from being rigid and prescriptive through to allowing a large degree of freedom as to how each theme is implemented.

- All themes must be applied but they should be tailored according to the risk, scale, nature, complexity or simplicity of the project.

- All minimum requirements specified in a theme must be satisfied.

The *purpose* of the *Business Case theme* is to establish mechanisms to judge whether the project is (and remains) desirable, viable and achievable as a means to support decision making in its (continued) investment.
(Axelos, 2017, p. 46)

BUSINESS CASE THEME

Outputs, Outcomes, & Benefits
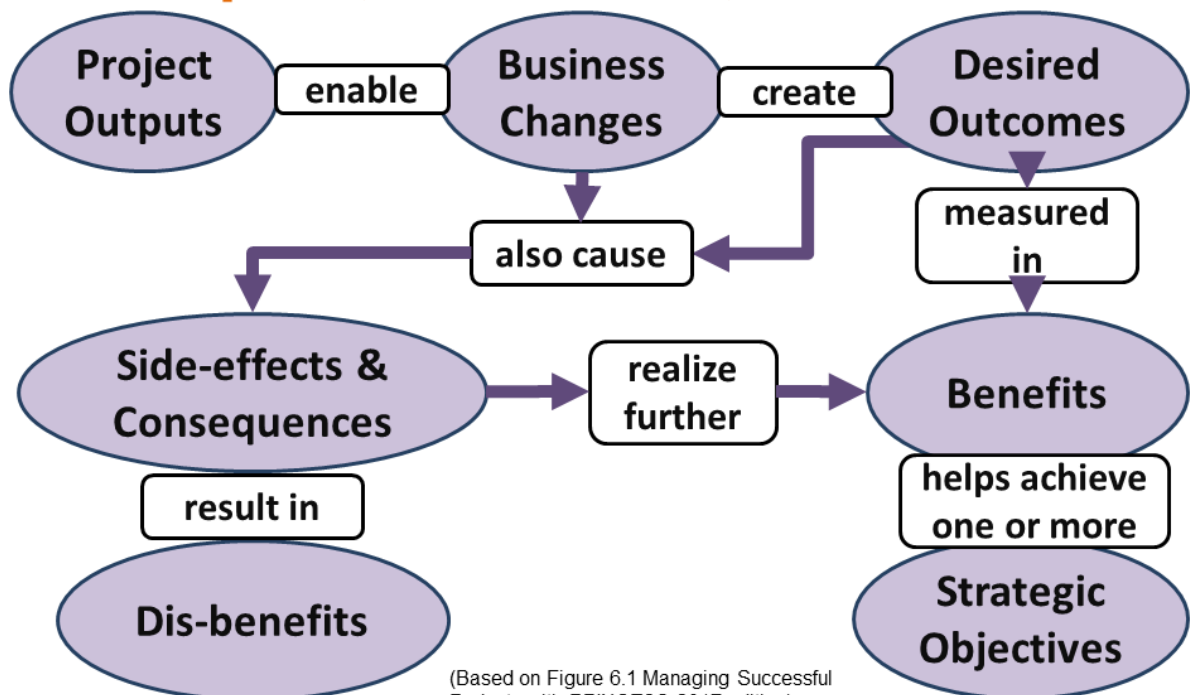
(Based on Figure 6.1 Managing Successful Projects with PRINCE2® 2017 edition).

Key Management Products

- Business Case
- Benefits Management Approach

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Business Case

- Documents the business justification for a project.
- Based on estimated costs of development, implementation, ongoing incremental operations and maintenance costs.
- Compares costs against anticipated benefits offset by any associated risks.
- Outlines how and when the anticipated benefits can be measured.

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Business Case Development

- Outline business case is developed in the starting up a project process.
- Refined by the initiating a project process.
- Directing a project process covers the approval & reaffirmation of the business case.
- Used by the controlling a stage process when assessing impacts of issues and risks.
- Reviewed and updated at the end of each management stage by the managing a stage boundary process, and at the end of the project by the closing a project process.

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Business Case

- Develop, Verify, Maintain, Confirm
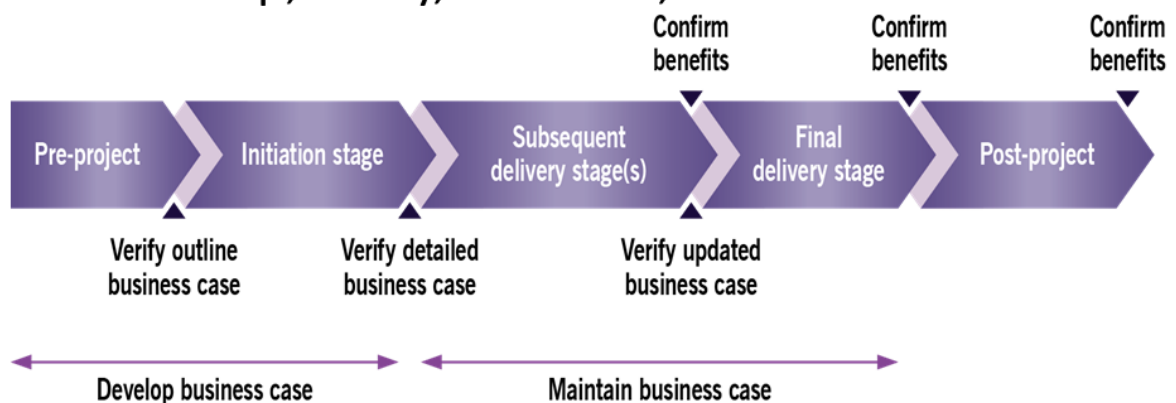
(Figure 6.2 Managing Successful Projects with PRINCE2® 2017 edition).

- It is possible to use an alternative document like a corporate business plan to replace the business case for part of the project lifecycle.

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Benefits Management Approach

- Defines the actions and reviews that will be in place to ensure that the outcomes are achieved and confirm that the benefits are realized.

- If part of a programme, the approach may be contained within the programme's benefits realization plan and executed at the programme level.

- Post-project, the approach is maintained and executed by corporate, programme management or the customer.

Approach Content

- Scope of the benefits management approach covering what benefits are to be managed and measured.
- Who is accountable for the expected benefits.
- What management actions are required in order to ensure that the project's outcomes are achieved.
- How to measure achievement of expected benefits, and when they can be measured.
- What resources are needed.
- Baseline measures from which the improvements will be calculated.
- How the performance of the project's product will be reviewed.

Minimum Requirements

- Create and maintain a business justification for the project; usually a business case. (Continued Business Justification)
- Review and update the business justification in response to decisions and events that might impact desirability, viability or achievability. (Continued Business Justification)
- Define the management actions that will be put in place to ensure the project's outcomes are achieved and confirm the project's benefits are realized. (Continued Business Justification)
- Define and document the roles and responsibilities for the business case and benefits management. (Defined Roles and Responsibilities)

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The *purpose* of the *Organisation theme* is to define and establish the project's structure of accountability and responsibilities.

(Axelos, 2017, p. 58)

ORGANISATION THEME

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Stakeholders

- Any individual, group or organization that can affect, be affected by, or perceive itself to be affected by, an initiative (i.e. a programme, project, activity or risk).

- Principal Project Stakeholders:
  - Business
  - User
  - Supplier

Successful Project Management Teams

- Represent the Business, the User, and the Supplier.

- Have clearly defined and assigned directing, managing, and delivering roles and responsibilities.

- Accountability at all levels is well defined.

- Have project role reviews at each stage boundary or when gaps appear in directing or managing the project or delivering the products.

- Have an effective communication approach.

Three Principal Project Interests

- Jobs vs roles
- Sharing roles
- Capacity
- Capability
- Conflict of interest
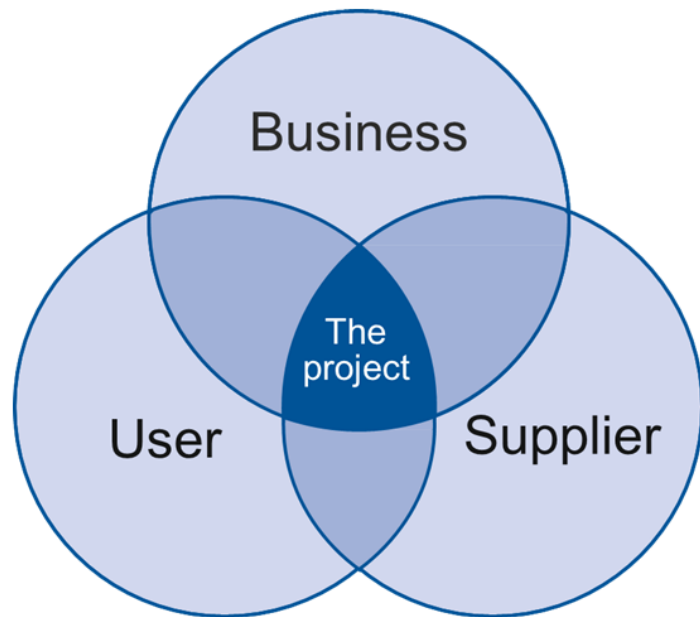
(Based on Figure 7.1 Managing Successful Projects with PRINCE2® 2017 edition).

Project Management Levels

Corporate, programme management or the customer

Directing – Project Board

Managing – Project Manager

Delivering – Team Manager(s)

Project Management team
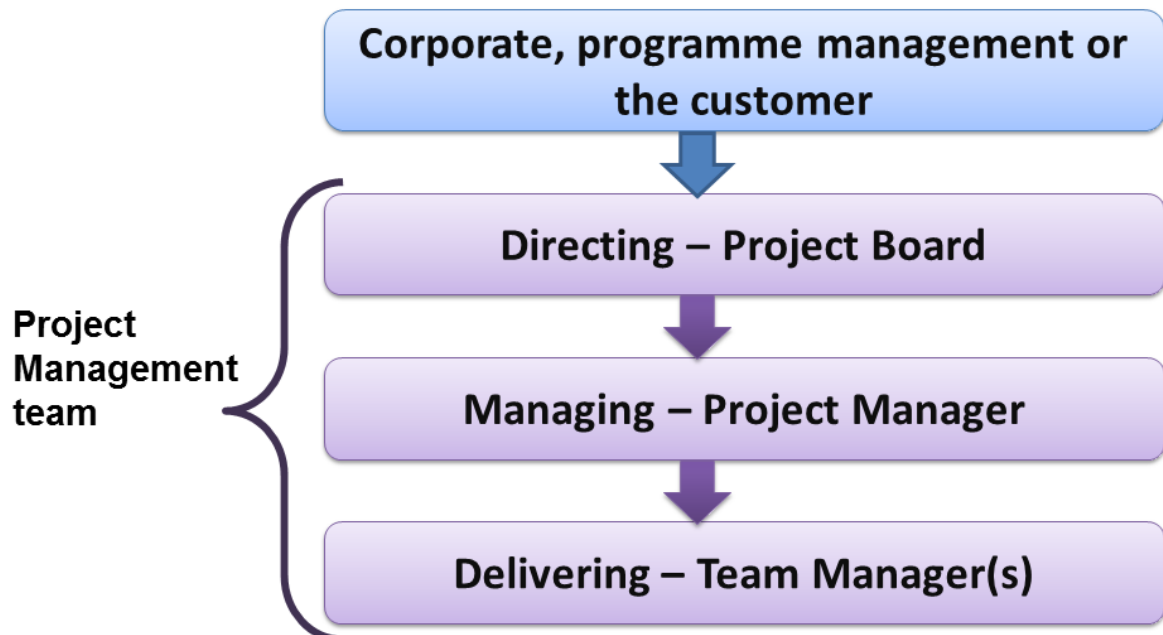
(Based on Figure 7.2 Managing Successful Projects with PRINCE2® 2017 edition).

Project Management Team Structure
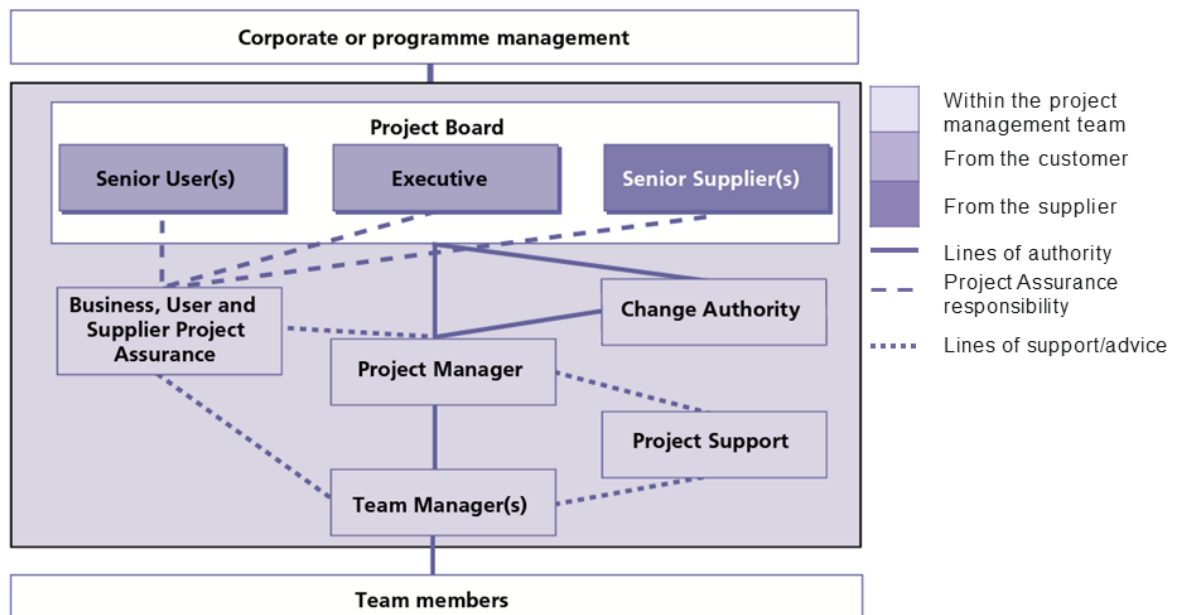
(Based on Figure 7.3 Managing Successful Projects with PRINCE2® 2017 edition).

Project Board

- All PRINCE2 projects must have a project board that has authority and responsibility for the project within boundaries set by corporate, programme management or the customer.
- Accountable for the success or failure of the project in terms of the business, user and supplier interests.
- Provides unified direction to the project.
- Delegating using the PRINCE2 organizational structure and controls.
- Facilitating integration of the project management team with the functional units of the participating organizations.
- Providing resources and authorizing the required funds.
- Effective decision-making.
- Providing visible and sustained support for the project manager.
- Ensuring effective communication within the project and externally.
- Via its project assurance role, responsible for monitoring all aspects of the project's performance and products independently of the project manager.

Executive

- Executive is ultimately accountable for the project's success, is the key decision make.

- Supported by Senior User and Supplier.

- Ensures the project is focused on achieving its objectives and delivering a product that will achieve the forecasted benefits.

- Ensures value for money and a cost-conscious approach.

- Balances the demands of the business, user and supplier.

- Vested in one individual, a single point of project accountability.

- Responsible for designing and appointing the project management team, including other members of the project board.

- If of a programme, corporate, programme management or the customer may appoint some or all of the project board members.

Senior User

- Specifies all user requirements and benefits to be achieved and is held to account for their realization.

- Liaises with the project management team monitoring that the solution will meet quality, functionality and ease of use.

- Represents all users including those for whom the products will achieve an objective and those who will use the products to deliver benefits.

- Commits user resources and monitors products against requirements.

- More than one person may be required but role shouldn't be split between too many people.

Senior Supplier

- Represents the interests of those designing, developing, facilitating, procuring and implementing the project's products.
- Accountable for the quality of products delivered and technical integrity of the project.
- Provides supplier resources to the project and ensures that designs are feasible and realistic. With exceptions, represents the interests of those who will maintain the specialist products after closure.
- More than one person may be required to represent the suppliers.

Project Assurance

- Project board members are responsible for the aspects of the project assurance role aligned with their respective areas of concern.
- May appoint separate individuals from corporate, programme management or customer organizations if they don't have sufficient time available or appropriate skills and knowledge.
- Board may use other to take on specific project assurance roles.
- Board members are accountable for the project assurance actions aligned with their area of interest, even if they delegate these to separate individuals.
- Project assurance supports the project manager with advice and guidance.
- When tasks are shared, responsibilities must be clarified.
- Appointees report to the project board member overseeing the relevant area of interest.
- project assurance roles can not be assigned to the project manager or project support.
- Project assurance should be involved in all the PRINCE2 processes.

Change Authority

- The project board is responsible for agreeing any change before it is implemented.
- These responsibilities may be delegated but ultimate accountability remains with the board.
- In a project where few changes are envisaged, it may be reasonable to leave this authority with the project board.
- Delegated authorities must be written into the appropriate role descriptions.
- If part of a programme, programme management must define the project board's level of authority.
- Anyone with the requisite skills and knowledge can be appointed.

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Project Manager

- Day to day management.

- Runs the Project on behalf of the Project Board.

- Single individual, not shared.

- Normally comes from the customer side.

- Manages Team Managers, Project Support.

- Liaises with Project Assurance and Project Board.

- On small projects may do the support functions and manage specialist work directly.

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Team Manager

- Ensures production of products allocated by the Project Manager.
- Reports to and takes direction from the Project Manager.
- Team Manager role may be filed by the Project Manager.
- Determined in SU and/or SB processes
- Work Packages can be used formally or informally to allocate work.
- Team managers report to Project Managers regardless of corporate position.
- If a team manager reports to a senior supplier, it is vital that the relationship does not create conflicts of interest or undermine the project manager's authority.

Project Support

- Responsibility of the Project Manager.

- Can be delegated, many organisations have a Project Support Office.

- Typically responsible for change control if not covered by another organization.

- Role of Project Support is not optional.

- Project Support and Project Assurance should be kept separate, not combined.

Combining Roles

- PRINCE2 allows roles to be combined within the following constraints:
  - the executive and project manager roles cannot be combined
  - there cannot be more than one executive or project manager
  - the executive's accountability for project success cannot be delegated
  - the project board should not assign any project assurance roles to the project manager, team manager or project support.
- Consideration should be given to any conflicts of responsibilities, the capacity to undertake the combined responsibilities, and whether bottlenecks might be created.
- Combining the roles of senior user and senior supplier is not recommended.

Communication Management Approach

- Describes the means and frequency of communication to parties internal and external to the project.
- Facilitates a controlled and bidirectional flow of information with stakeholders.
- Approach must align with the programme's approach.
- The project manager is responsible for documenting the approach.
- Reviewed and possibly updated at each management stage boundary.
- Used in the final management stage to ensure parties who need to be advised that the project is closing are advised appropriately.
- During a project, corporate management, programme management or the customer retains control by receiving project information as defined in the approach.

Minimum Requirements

- Defined organization structure and roles ensuring all of the responsibilities in PRINCE2's role descriptions are fulfilled. (Defined Roles and Responsibilities)
- Documented rules for delegating change authority responsibilities, if required.
- Defined approach to communicating and engaging with stakeholders.
- Production and maintenance of the PID and Communication Management Approach.

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Lecture 3

- Quality Theme

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Quality Theme

- Defines the approach to ensuring products:
  - Meet business expectations
  - Enable benefits to be achieved
- A product focus is central to quality.
- Theme addresses methods and responsibilities for the specification, development and approval of the products and the management of the project.

Quality Defined

- Terminology is derived from the ISO 9000 standards.
- Quality is the degree to which a set of inherent characteristics of a product, service, process, person, organization, system or resource fulfils requirements.
- Quality management is coordinated activities to direct and control an organization with regard to quality.

Quality Management System

- A quality management system is the complete set of quality standards, procedures and responsibilities for a site or organization. A site or organization is the permanent or semi-permanent organization(s) sponsoring the project work and are 'external' to the project.
- They could be the corporation, a division, a programme or a portfolio. Any of these may have their own quality management system.
- When more than one organisation participates in a project and they each have their own quality management system, the project's approach to quality must address this situation.

Key Terms in PRINCE2

- Customer's quality expectations: A statement about the quality expected from the project product, captured in the project product description.
- Acceptance criteria: A prioritized list of criteria that the project product must meet before it will be accepted by the customer.
- Quality criteria: A description of the quality specification that the product must meet, and the quality measurements that will be applied by those inspecting the product.

Customer Quality Expectations

- Captured in discussions with customer, refined for inclusion in project product description, agreed early in the starting up a project process. Should cover:
  - Key quality requirements for the project product.
  - Standards & processes that will be required to achieve specified quality requirements, any customer's and/or supplier's quality management system to be used.
  - Useful measurements for assessing whether the project product meets the quality requirements.
- The key quality requirements drive the choice of solution and influence time, cost, scope, benefits and risk performance targets of the project.

Acceptance Criteria

- Examples are ease of use, ease of support, ease of maintenance, appearance, major functions, development costs, running costs, capacity, availability, reliability, security, accuracy and performance.
- When it can be demonstrated that all the acceptance criteria have been met in accordance to the priorities, the project's obligations are fulfilled and the project can be closed.

Quality Planning

- Quality planning is about defining the project's products including quality criteria, quality methods and who is responsible.
- Planning provides a secure basis to:
  - Obtain agreement by the project board on overall quality expectations, products required and their quality criteria, how quality will be achieved and assessed and the acceptance criteria for the project's product.
  - Communicate these agreements so that all the project stakeholders have a common understanding of what the project is to achieve.
  - Control and achieve products that are fit for purpose.

Key Management Products

- Project Product Description Quality Management Approach
- Product Description
- Quality Register

Project Product Description

- Special product description that defines what the project must deliver in order to gain acceptance. Used to:
  - gain agreement from the user on the project's scope and requirements
  - define the customer's quality expectations
  - define the acceptance criteria, method and responsibilities for the project.
- Created in the starting up a project process as part of the initial scoping activity
- Refined during the initiating a project process when creating the project plan.

Quality Management Approach

- Describes how quality will be managed on the project.
- Includes the specific processes, procedures, techniques, standards and responsibilities to be applied.
- Created in the Initiation stage.

Product Description

- Understand the detailed nature, purpose, function and appearance of the product.
- Define who will use the product.
- Identify the sources of information or supply for the product.
- Identify the level of quality required of the product.
- Enable identification of activities to produce, review and approve the product.
- Define the people or skills required to produce, review and approve the product.

Quality Register

- summarizes all the quality management activities that are planned or completed.
- Provides information for end stage reports and the end project report.
- Its purpose is to:
  - issue a unique reference for each quality activity
  - act as a pointer to the quality records for a product
  - act as a summary of the number and type of quality activities undertaken.

Sample Quality Register

Quality Activity ID	Product ID	Product	Quality Method	Producer	Reviewer(s)	Approver(s)	Target Review Date	Actual Review Date	Target Approval Date	Actual Approval Date	Result
1	121	Test Plan	Inspection	Ali	Paulo	John, Rita	14-Feb	21-Feb	21-Feb	28-Feb	Pass
2	124	Water Pump	Performance Test	Paulo	Ali, Bob	John	20-Mar	20-Mar	27-Mar	NA	Fail
3	124	Water Pump	Maintenance Test	Paulo	Ali, Amir	Rita	21-Mar	21-Mar	27-Mar	27-Mar	Pass
.	.	.	.	.	.	.	.	.	.	.	.

(Based on Table 8.2 Managing Successful Projects with PRINCE2® 2017 edition).

PRINCE2 Quality Audit Trail (Planning)
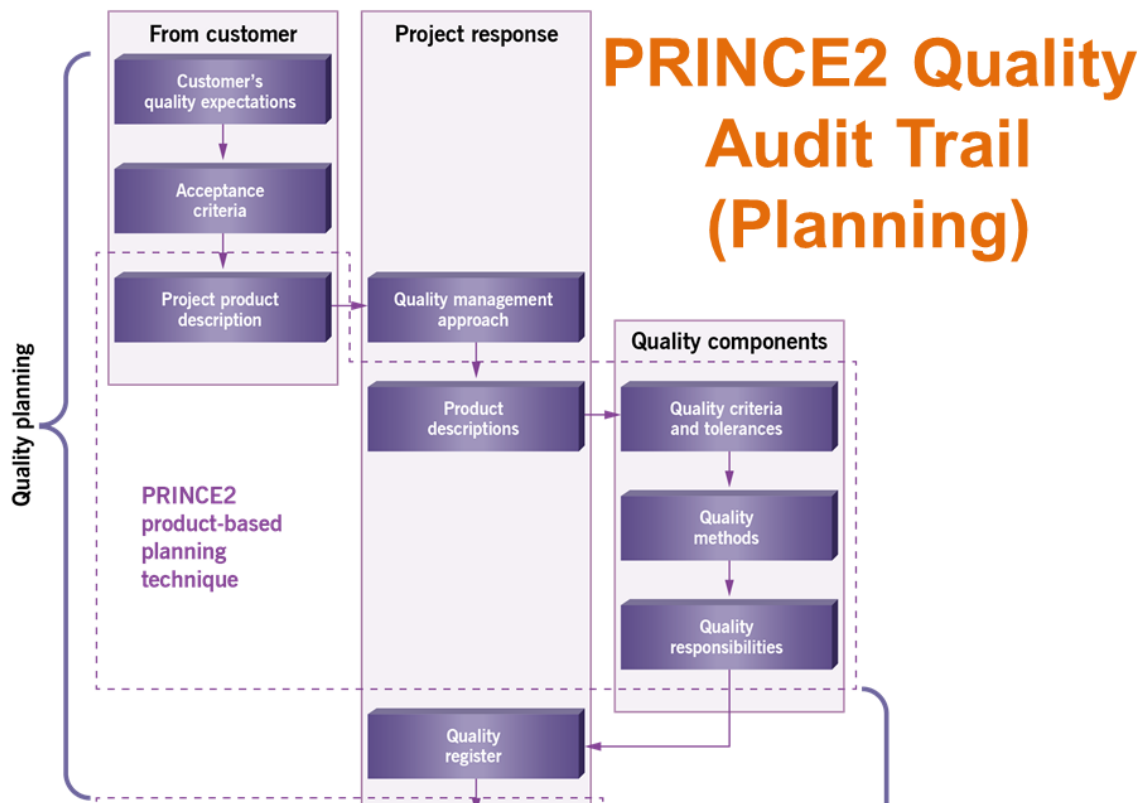
(Figure 8.1 Managing Successful Projects with PRINCE2® 2017 edition).

Quality Control

- Operational activities and techniques used by project members to ensure that product quality criteria are met.

- Activities and techniques used by project members to engage in continuous improvement and eliminating unsatisfactory performance.

PRINCE2 Quality Audit Trail (Control)
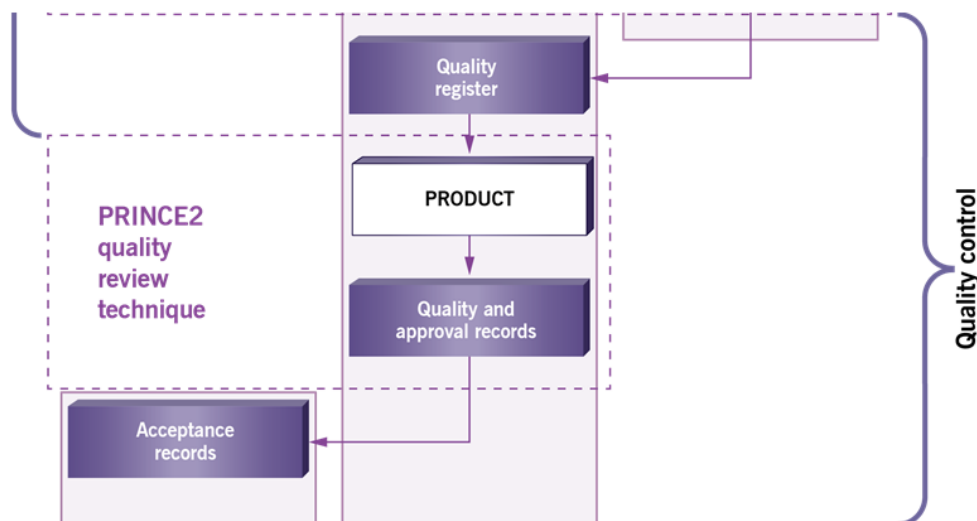
(Figure 8.1 Managing Successful Projects with PRINCE2® 2017 edition).

Quality Planning vs Control

- Quality planning defines.
- Quality control enacts the plan.
- In PRINCE2 they are linked together through the Quality register.

Project Assurance

- Project assurance is the project board's responsibility to assure itself that the project is being conducted correctly.
- The project board members each have a specific area of focus for project assurance, namely business assurance for the executive, user assurance for the senior user(s) and supplier assurance for the senior supplier(s).
- Project assurance is therefore independent of the project manager but not independent of the project.

Quality Assurance

- Quality assurance provides a check that the project's direction and management are adequate for the project and that it complies with relevant corporate, programme management or customer standards and policies.
- Quality assurance is **INDEPENDENT** of the project.
- Provides independent assessments of a project's processes, organisation, and/or management products to see if they are adequate to ensure quality requirements will be met.
- Quality assurance is not Project Assurance nor does it do quality planning or quality control.

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Minimum Requirements

- Have a quality management approach that covers:
  - the project's approach to quality control
  - the project's approach to project assurance
  - how the management of quality is communicated throughout the project lifecycle
  - roles and responsibilities for quality management (Defined roles and responsibilities principle).
- Specify explicit quality criteria for products in their product descriptions (Focus on products principle).
- Maintain quality records in some form of quality register.

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Lecture 4

- Plans Theme
- Product Based Planning

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The *purpose* of the *Plans theme* is to facilitate communication and control by defining the means of delivering the products in terms of where, how, by whom, and estimating the when and how much.

PLANS THEME

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PRINCE2 Planning Levels
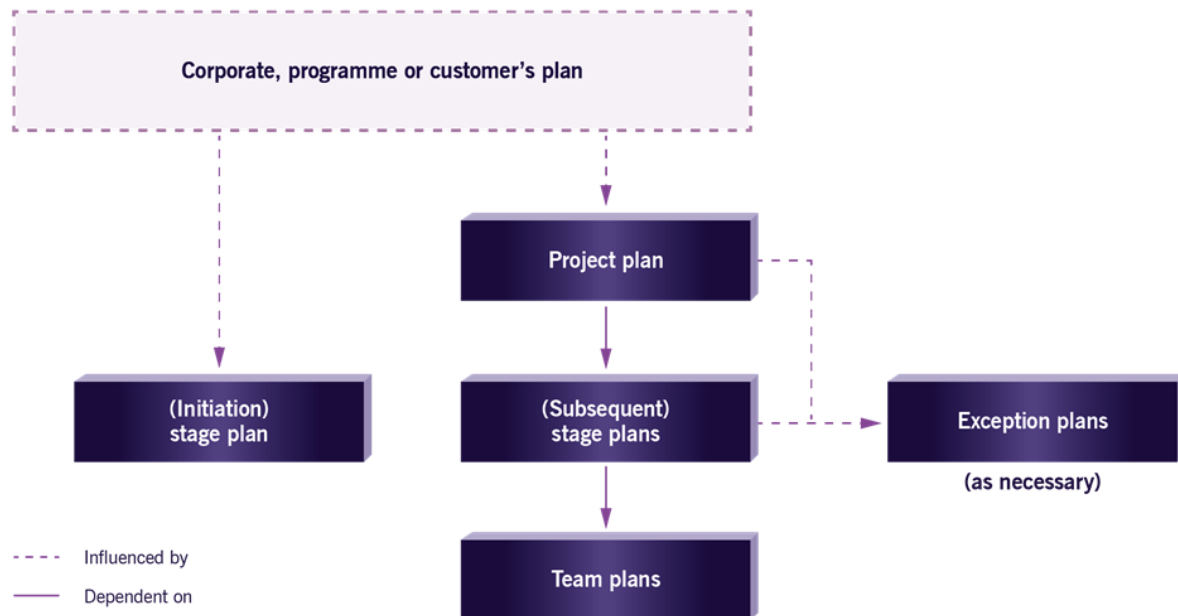
(Figure 9.1 Managing Successful Projects with PRINCE2® 2017 edition).

Project Plan

- Provides a statement of how and when a project's time, cost, quality and scope performance targets are to be achieved.

- Shows the major products, activities and resources required for the project.

- Provides the planned project costs and timescales for the business case, and identifies the major control points, such as management stages and milestones.

- Used by the project board as a baseline against which to monitor project progress.

Stage Plan

- Covers the products, resources, activities and controls specific to the management stage and are used as a baseline against which to monitor management stage progress.

- Required for each management stage.

- Elements are broken down to the level of detail required for day-to-day control by the project manager.

- Product descriptions are required for all products identified in a stage plan.

Team Plan

- Optional and may not need to follow the same composition as a project plan or stage plan.

- If used, could comprise a schedule appended to the work package(s) assigned to the team manager.

Exception Plan

- Exception plans must be produced to show the actions required to recover from or avoid a forecast deviation from agreed tolerances in the project plan or a stage plan.
- For a stage plan exception, it covers the period from the present to the end of the current management stage.
- For project level, the project plan will be replaced.

Management Stages for Control

- Management stages are partitions in the project with decision points.
- Each stage is a collection of activities and products whose delivery is managed as a unit.
- The Project manager manages that collection of work on behalf of the Project Board.
- Number of stages: A minimum of two.
  - Initiation Stage
  - Project product delivery stage and Closing the project

Technical Stages

- Technical stages and management stages are not the same.
- Technical stages are activities or techniques based partitions and often overlap, management stages do not.
- Technical stages often use a particular set of specialist skills. Management stages equate to commitment of resources and authority to spend.
- Often the two types of stages will coincide especially when the management decision is based on the output from the technical stage.
- However, sometimes the stage boundaries will not coincide.
- PRINCE2 concentrates on the management stages otherwise the project runs the risk of being driven by the specialist teams instead of the customer's requirements.

Specialist work in Technical Stages
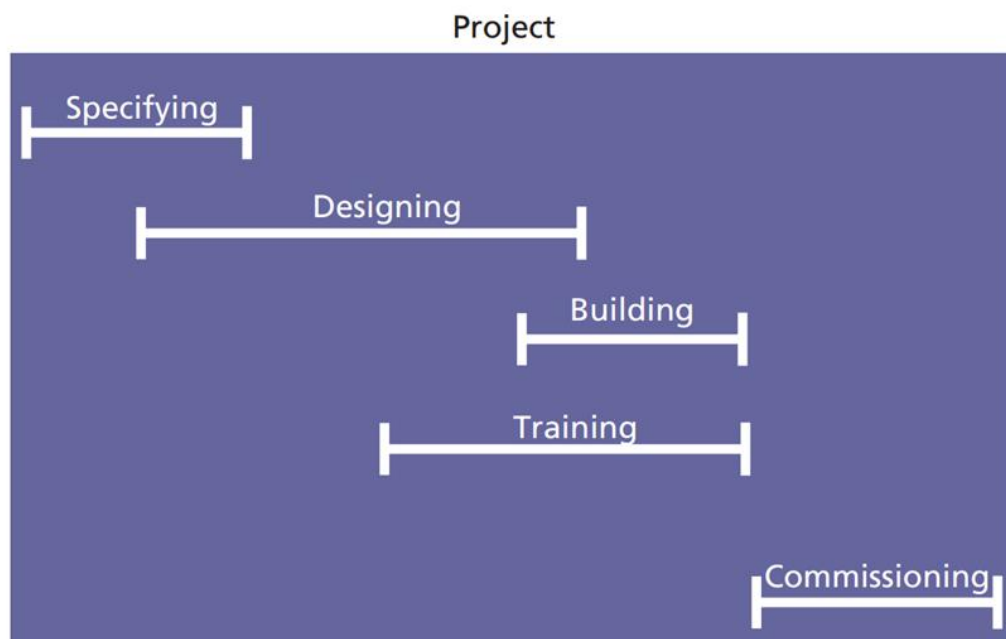
(Figure 9.3 Managing Successful Projects with PRINCE2® 2017 edition).

Specialist Work Crossing Management Stages
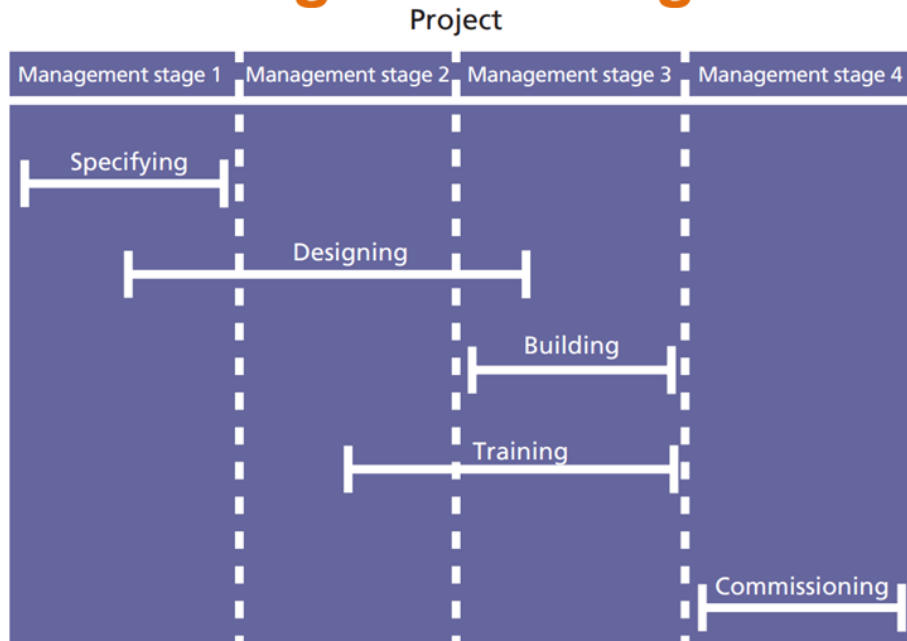
Project

(Figure 9.4 Managing Successful Projects with PRINCE2® 2017 edition).

Specialist Work Aligned to Management Stages
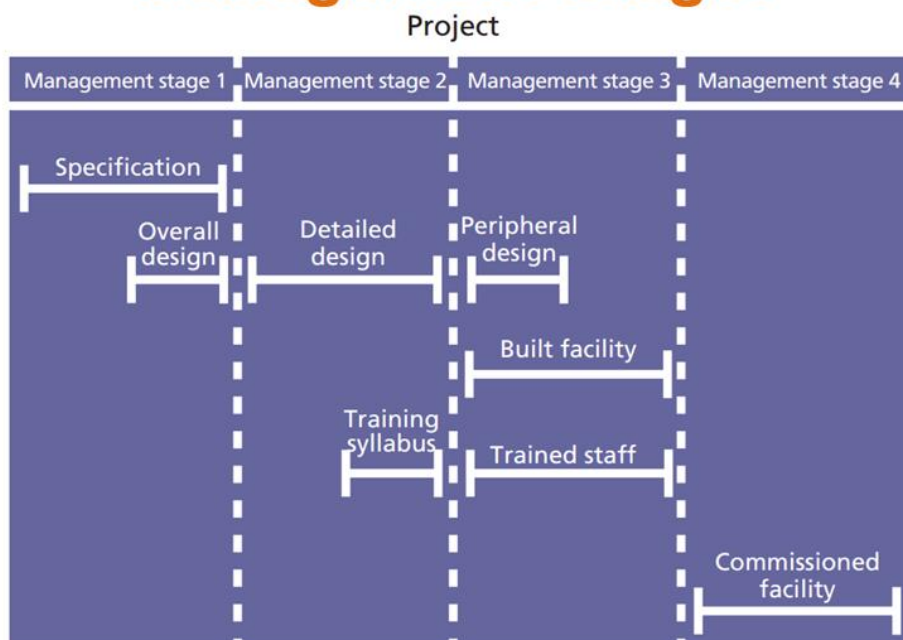
Project

(Figure 9.5 Managing Successful Projects with PRINCE2® 2017 edition).

Determining Management Stages

- Understanding the scale, duration and risk of the project.
- Determining realistic planning horizons.
- Recognising where key decision points need to be on the project.
- Amount of confident the project board and project manager have in proceeding.
- Reconciling delivery steps and management stage boundaries with clear and measurable deliverables in the product description(s) concerned.
- Aligning with programme activities.

PRINCE2 Approach to Plans

(Based on Figure 9.2 Managing Successful Projects with PRINCE2® 2017 edition).

Define and Analyse the Products using Product Based Planning

Write the [Project] Product Description

For Project Plan only
Otherwise go to the next step

Create the product breakdown structure

Write the Product Descriptions

For all levels of plan

Create the product flow diagram
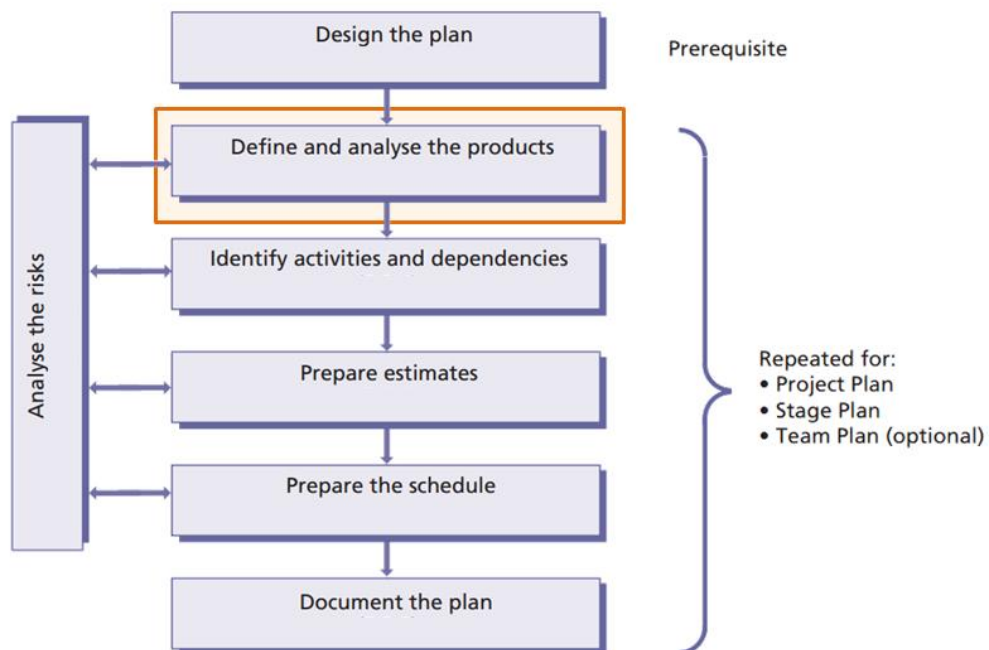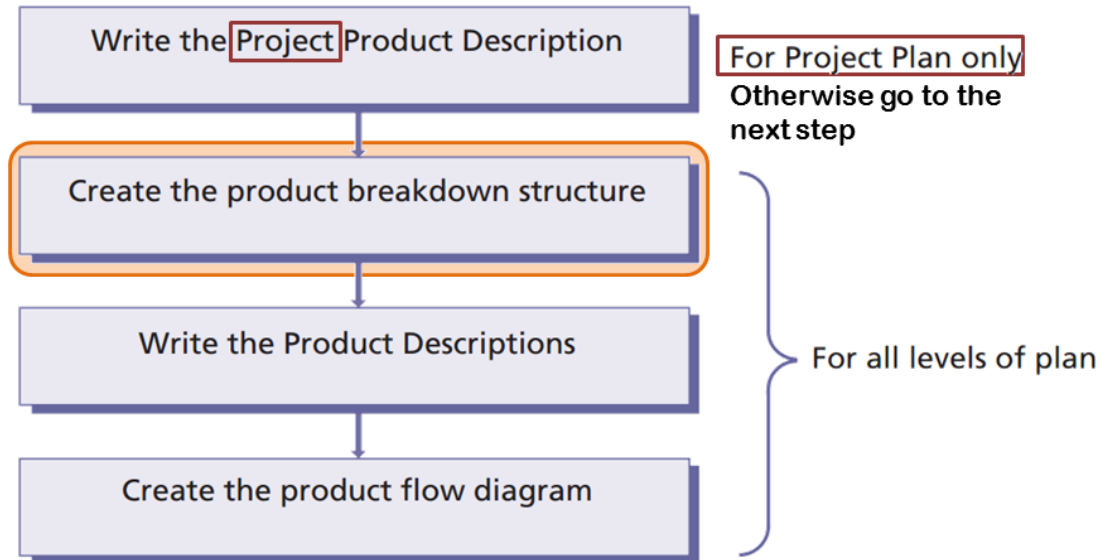
(Based on Figure 9.3 Managing Successful Projects with PRINCE2® 2017 edition).

Hierarchy Product Breakdown Structure
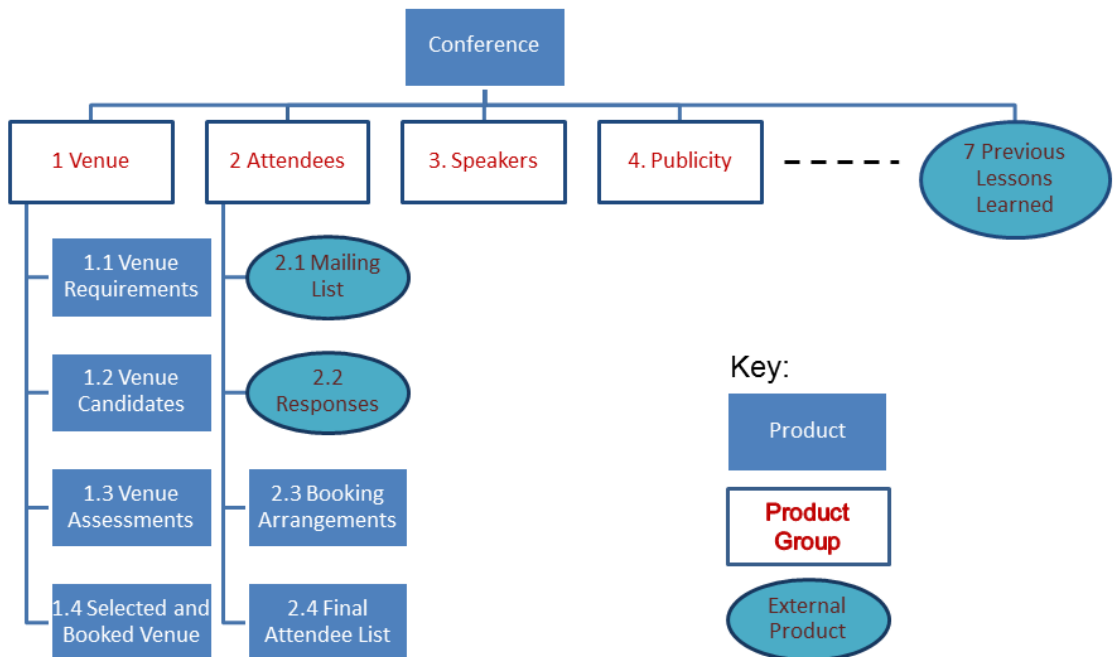
Conference

1 Venue | 2 Attendees | 3. Speakers | 4. Publicity | 7 Previous Lessons Learned

1.1 Venue Requirements
2.1 Mailing List

1.2 Venue Candidates
2.2 Responses

1.3 Venue Assessments
2.3 Booking Arrangements

1.4 Selected and Booked Venue
2.4 Final Attendee List

Key:

Product

Product Group

External Product

Mind Map Product Breakdown Structure

6 Conference logistics

6.1 Selected subject matter [EXTERNAL]
6.2 Agreed date [EXTERNAL]
6.3 Agreed programme
6.4 On-the-day staff

7 Previous conference lessons and materials [EXTERNAL]

1 Venue

1.1 Venue requirements
1.2 Candidate venues
1.3 Venue assessments
1.4 Selected and booked venue

5 Delegate handouts

5.1 Covers
5.2 Printed agenda
5.3 Slides and notes
5.4 Satisfaction survey form

Conference

2 Attendees

2.1 Email list [EXTERNAL]
2.2 Responses [EXTERNAL]
2.3 Booking arrangements
2.4 Final attendee list

4 Publicity

4.1 Bulk email
4.2 Press release

3 Speakers

3.1 Speaker options
3.2 Speaker invitations
3.3 Booked speakers

(Figure D.2 Managing Successful Projects with PRINCE2® 2017 edition).

Indented List Product Breakdown Structure

Conference

1 Venue
1.1 Venue Requirements
1.2 Candidate Venues
1.3 Venue Assessments
1.4 Selected & Booked Venue

2 Attendees
2.1 Mailing List (external)
2.2 Responses (external)
2.3 Booking Arrangements
2.4 Final Attendees List

3 Speakers
3.1 Speaker Options
3.2 Speaker Invitations
3.3 Booked Speakers

4 Publicity
4.1 Mail-shot
4.2 Press Release

5 Delegate Hand-outs
5.1 Covers
5.2 Printed Agenda
5.3 Slides and Notes
5.4 Satisfaction Survey

6 Conference Logistics
6.1 Selected Subject Matter (external)
6.2 Agreed Date (external)
6.3 Agreed Programme
6.4 On-the-day Staff

7 Previous Lessons Learned (external)

Define and Analyse the Products using Product Based Planning

Write the Project Product Description	For Project Plan only

Create the product breakdown structure

Appendix A.17

Write the Product Descriptions

For all levels of plan

Create the product flow diagram

(Based on Figure 9.6 Managing Successful Projects with PRINCE2® 2017 edition).

Write the Product Descriptions

Identifier	Conference/4.1/version 1.0
Title	Mail-shot
Purpose	The mail-shot is the primary means of advertising the conference to potential delegates. It will be mailed to a list of professionals working in the industry.
Composition	• Mailing envelope • Letter giving outline explanation of the conference • Leaflet giving detailed explanation of the conference, the venue and how to make a booking • Booking form • Response envelope
Derivation	• Mailing list • Agreed programme • Booking arrangements • Selected venue
Format and presentation	Letter to be A4 on standard branded letterhead Leaflet and booking form to be A5 size Mailing envelope to be C5
Development skills required	Marketing, design and copywriting skills required Knowledge of conference necessary
Quality responsibilities	• **Producer** – Event management company • **Reviewers** – as stated under 'Quality Skills Required' • **Approver** – Membership secretary

Product Description con't

Quality criteria	Quality tolerance	Quality method	Quality skills required
Adheres to corporate identity standards	As defined in corporate identity standards	PRINCE2 quality review	Marketing team
Letter and leaflet accurately reflect all agreed details of the conference	None	Inspection	Conference Project Manager
No spelling or grammatical errors in any elements of the mail-shot	None	Word processor spell checker Inspection	Proof reader
The covering letter fits on one side of A4	May extend to reverse of a single sheet of A4	Inspection	Proof reader

Define and Analyse the Products using Product Based Planning

Write the Project Product Description

For Project Plan only
Otherwise go to the next step

Create the product breakdown structure

Write the Product Descriptions

For all levels of plan

Create the product flow diagram
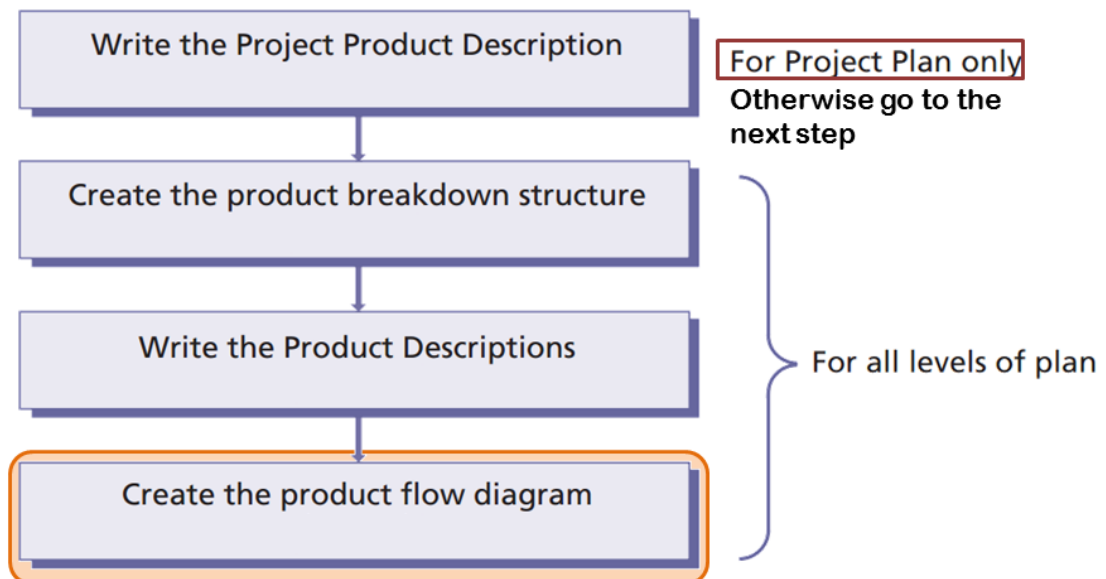
(Based on Figure 9.6 Managing Successful Projects with PRINCE2® 2017 edition).

Create the Product Flow Diagram
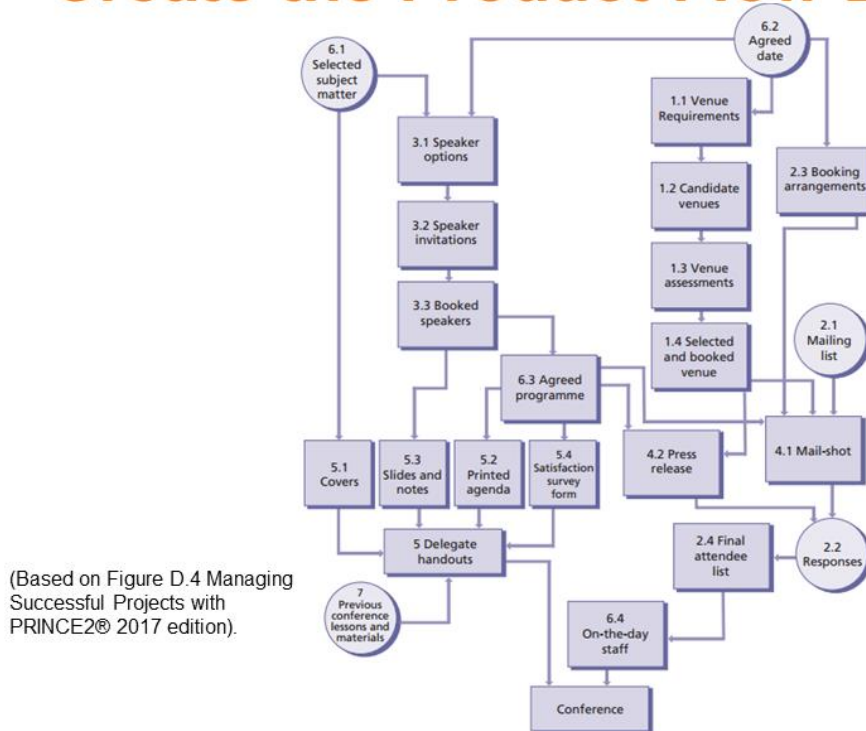
(Based on Figure D.4 Managing Successful Projects with PRINCE2® 2017 edition).

PRINCE2 Approach to Plans
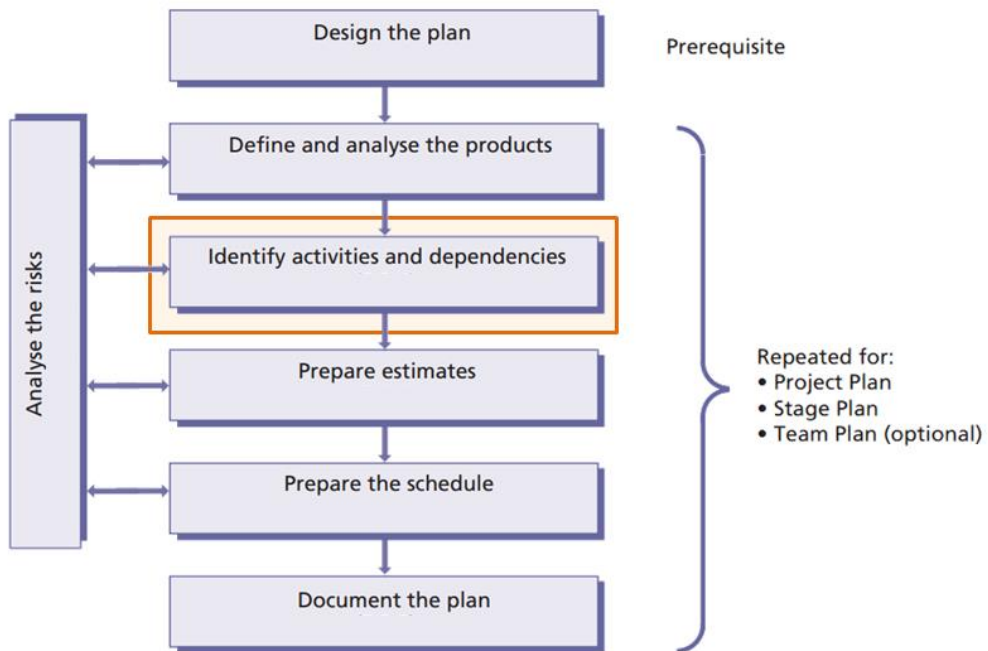
(Based on Figure 9.2 Managing Successful Projects with PRINCE2® 2017 edition).

Identifying Activities and Dependencies

- In general there are two options:
  - Make a separate list of activities in a project management software such as MS Project, or
  - Take the products from the product breakdown structure and create a work breakdown structure to define the activities required.

- Must include all activities required to develop the specialist products including management, quality checks, sourcing and obtaining products from external sources, converting external products, etc.

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PRINCE2 Approach to Plans

(Based on Figure 9.2 Managing Successful Projects with PRINCE2® 2017 edition).

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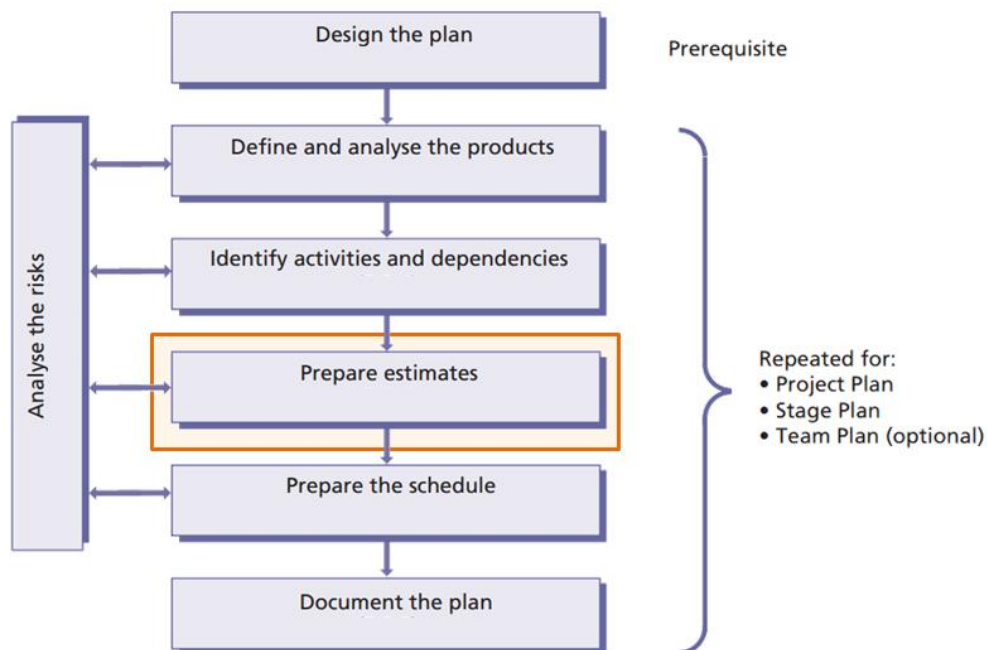
Prepare Estimates

- There are many techniques including:
  - Top Down
  - Bottom up
  - Top Down with Bottom up
  - Comparative
  - Parametric
  - Single Point
  - Three Point
  - Delphi

Estimating Basics

- Identify the resources required including human (skills, abilities, knowledge) and non-human.
- Estimate the effort / expenditure required per resource to accomplish the needed outcome.
- Generally resources are 70 to 80% productive.
- Effort and activity duration are not the same.
- Rely on previous experience of others as well as yourself when estimating.
- Ensure the person responsible for creating the product is responsible for creating effort estimates.
- Put contingency in for problems and unexpected events.
- Cost each activity, not the plan as a whole.
- Communicate any assumptions, exclusions or constraints you have to the user(s).
- People tend to underestimate how long tasks will take.

PRINCE2 Approach to Plans
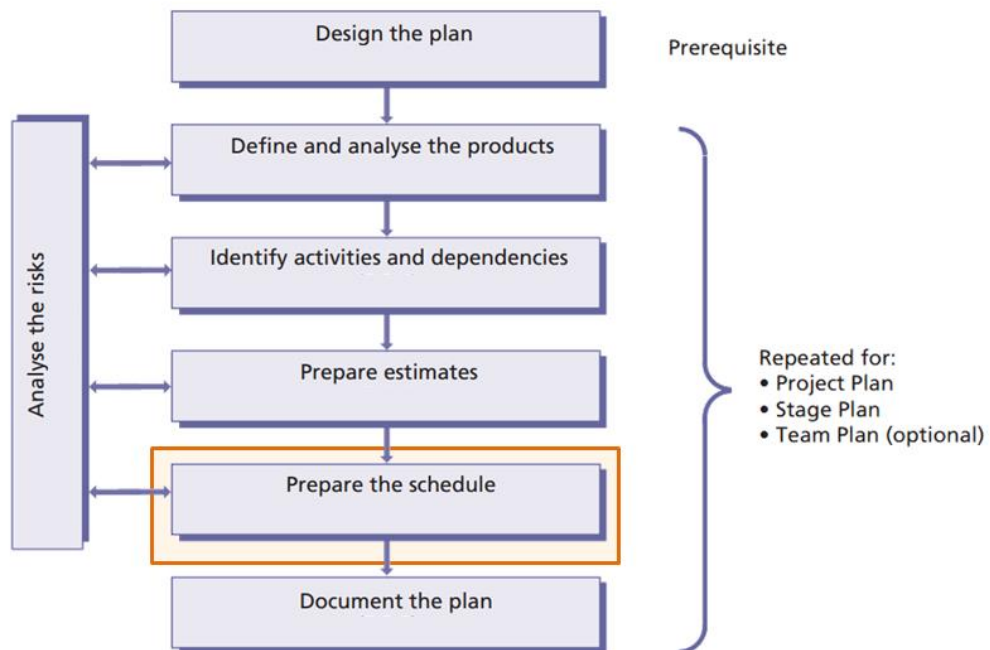
(Based on Figure 9.2 Managing Successful Projects with PRINCE2® 2017 edition).

Prepare the Schedule

- The schedule shows when activities will be carried out.

- Takes identified activities, their dependencies, their estimated effort and duration and sequences them for optimal performance.

- Resource allocation can significantly affect effort and duration.

Key Steps in Scheduling

- Define activity sequence.
  - Activity on node diagram.
  - Critical path analysis.
- Assess available resources.
  - People, equipment, materials, purchased items.
  - Be specific regarding assumptions of hours and dates available, level of experience, names, etc.
- Make resource assignments and adjust effort and duration accordingly.
- Level resource usage.

Activity on Node Diagram

Arrows show dependencies

Activities are shown as boxes

Task 3 cannot begin until both Tasks 1 and 2 have been complete

Task 1

Task 3

Start

Task 5

End

Task 2

Task 4

Task 4 is a predecessor to Task 5 and a successor to Tasks 1 and 2

ES = 18	D = 5	EF = 23
Task 4		
LS = 18	TF = 0	LF = 23

ES = Earliest start time for the activity
D = Duration of the activity
EF = Earliest finish time for the activity
LS = Latest start time for the activity
TF = Total float for the activity
LF = Latest finish time for the activity
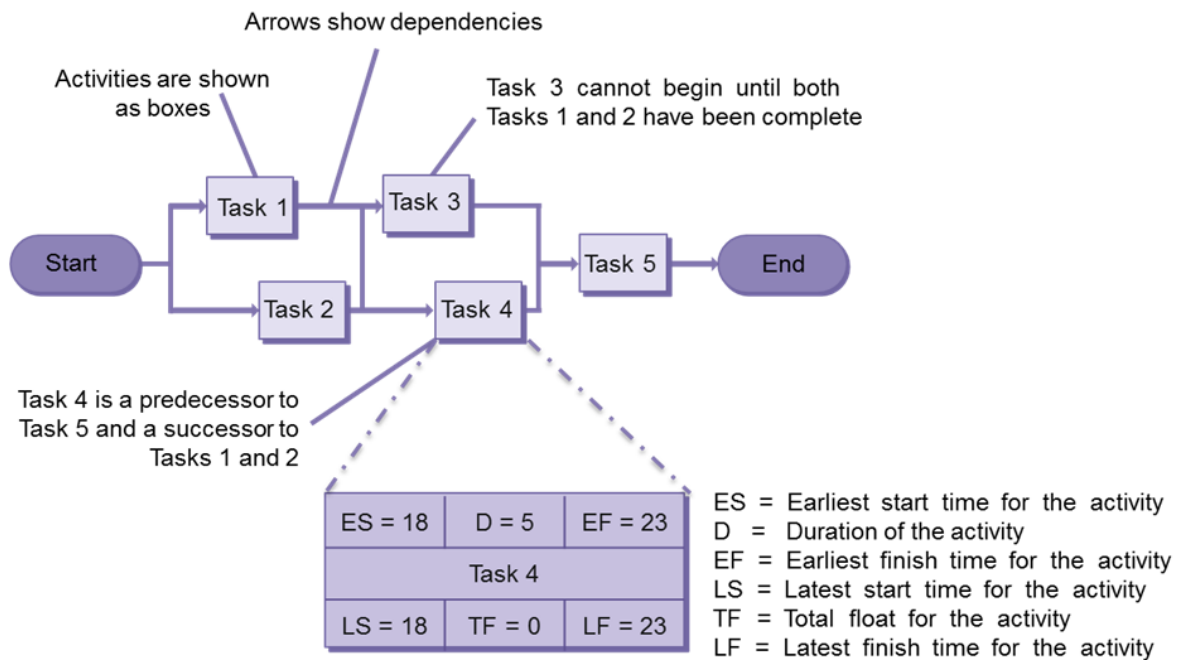
(Figure 9.7 Managing Successful Projects with PRINCE2® 2017 edition).

Understanding Critical Path

- The amount of time that an activity can be delayed without affecting the overall completion of the plan is known as the **float** or **slack**.
- The critical paths are those sequences of activities that have zero float.
- If any activity on the critical paths finish late, the whole plan will finish late.
- Identifying the critical paths allows monitoring of activities that:
  - Must be completed on time for the whole plan to be completed to schedule
  - Can be delayed for a time period if resources need to be re-allocated to catch up on missed activities.

Finish the Schedule

- Add agreed control points.
- Define milestones.
- Calculate total resource requirements and costs. Don't forget to include:
  - Activities to develop and verify specialist products
  - Project management activities
  - Risk and change budgets if they are to be used
  - Cost tolerances
- Determine best ways to present the schedule and create the required charts, graphs, and or diagrams.

PRINCE2 Approach to Plans
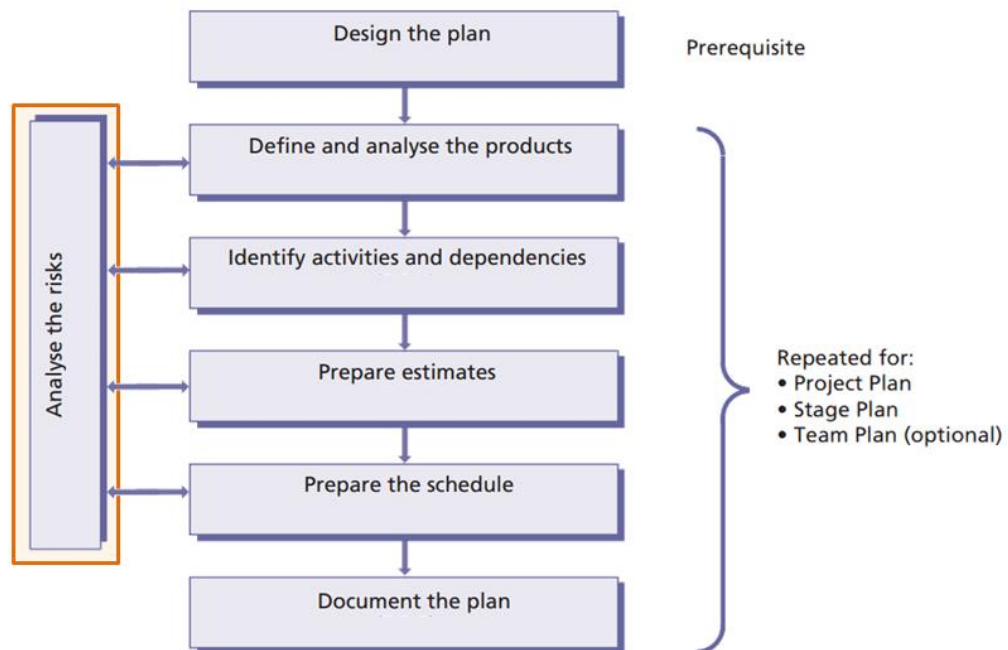
(Based on Figure 9.2 Managing Successful Projects with PRINCE2® 2017 edition).

Risk Analysis

- Risk analysis is performed throughout the planning process.
- Examine all planning information to determine risks associated with the plan.
- Assess risks and modify plan if required.
- Enter risks in the risk register except during the initiation stage.
- During the initiation stage, use the daily log.

PRINCE2 Approach to Plans
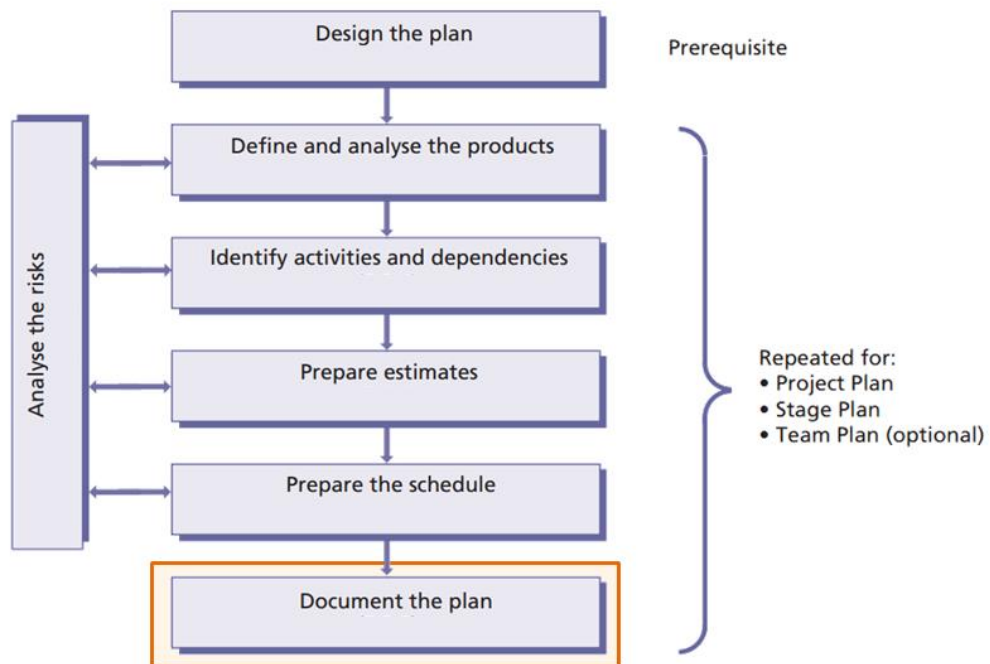
(Based on Figure 9.2 Managing Successful Projects with PRINCE2® 2017 edition).

Prepare the Plan

- Do a thorough risk assessment of all aspects of the plan.

- Compile the plan into a document based on the design template created in the first step of the planning process.

- Complete all descriptive sections as per the plan template.

- Review the plan for completeness and accuracy, correct any errors or omissions.

Minimum Requirements

- Plans must enable the business case to be realized (Continued Business Justification).
- At least two management stages (Manage by Stages).
- A project plan for the project, a stage plan for each management stage (Manage by Stages).
- Product-based planning for project, stage and exceptions.
- Specific plans for managing exceptions (Manage by Exception).
- Defined roles and responsibilities for planning (Defined Roles and Responsibilities).
- Use lessons to inform planning (Learn from Experience).
- Product descriptions, including one for the project as a whole, and product breakdown structures must be created and maintained.

Lecture 5

- Risk Theme

The *purpose* of the *Risk theme* is to identify, assess and control uncertainty and, as a result, improve the ability of the project to deliver the anticipated benefits.

RISK THEME

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Risk Defined

- An uncertain event or set of events that, should it occur, will have an effect on the achievement of objectives.
- A risk is measured by a combination of the probability of a perceived threat or opportunity occurring, and the magnitude of its impact on objectives.
- Threats are risks with a potential negative impact.
- Opportunities are risks with a potential positive impact.
- Risks are inevitable and must be managed in accordance with an effective risk management procedure.

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Managing Risk

- PRINCE2 does not prescribe a particular approach to risk management. Any approach that meets the minimum PRINCE2 requirements can be said to be following PRINCE2.
- Every project needs its own risk management approach that addresses the unique project requirements while remaining compliant with corporate, programme or portfolio risk management requirements.
- It must describe how risk management will be incorporated in the project management activities.
- It should include the Project Board's attitude towards risk taking (risk appetite).
- The risk appetite dictates the amount of risk deemed acceptable to the Board. This information is used to set the risk tolerance.

Key Management Products

- Risk Management Approach
- Risk Register

Risk Management Approach

- A risk management approach describes how risk will be managed on the project.

- Many factors influence the approach such as the customer's quality expectations, number of organizations involved, stakeholder needs, project dynamics, and assumptions.

- Much of this information comes from the Project Brief and Project Product Description, corporate, programme management or customer risk management guides, strategies or policies.

Risk Management Approach Contents

- Specific procedures
- Tools and techniques
- Records and reporting
- Timing of risk activities
- Roles and responsibilities
- Scales for probability, impact, proximity
- Risk categorization, response categories
- Early warning indicators
- Risk tolerances
- Risk budget approach

Risk Register

- Prior to establishing the Risk Register, risks are captured in the Project Manager's daily log.
- Once established, information on ALL of the identified risks relating to the project are captured and maintained in the register.
- Project Support will usually maintain the Risk Register on behalf of the Project Manager.
- The risk management approach describes the procedure for registering risks and maintaining the risk register.

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Risk Register Contents

- Each risk entered in the register must have a unique identifier.
- Typical details in the register include:
  - Who raised the risk and when was it raised
  - The risk category as defined in the RMS
  - A description of the risk and it's proximity
  - Probability, impact, and expected value
  - Risk response category and response actions
  - Status, owner and actionee

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Risk Management Procedure

Identify Context

Identify

Formulate RMA

Identify Individual Risks

Action, check, correct

Implement

Communicate

Estimate probability & impact

Assess

Evaluate net effect of all risks

Plan

Plan appropriate responses

(Based on Figure 10.1 Managing Successful Projects with PRINCE2® 2017 edition).
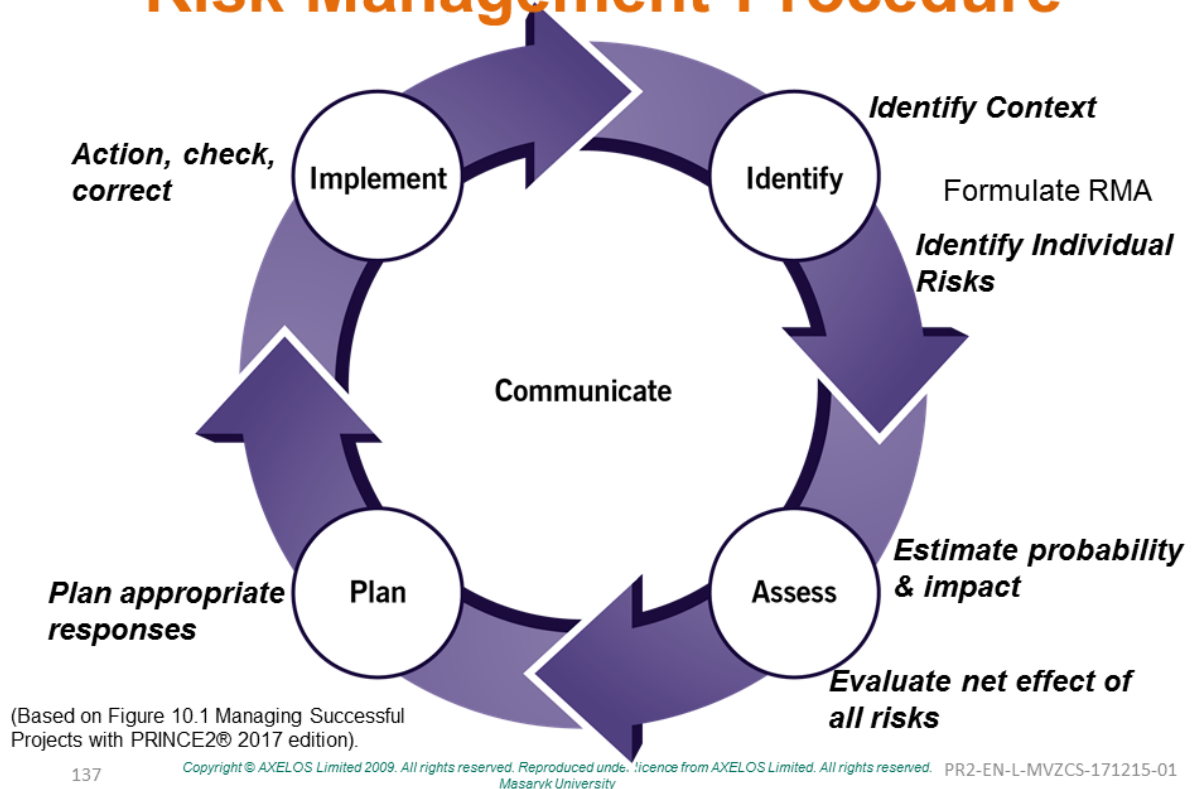
Identify Context

- Understand the specific objectives that are at risk.

- Formulate the risk management approach.

- This information will be derived from the project mandate, the project brief and the project product description.

Identify Risks

- The goal is to proactively determine opportunities and threats as early as possible.
- Anybody can raise an issue or risk.
- Identified risks should be captured in the risk register.
- Prepare early warning indicators to monitor critical aspects of the project.
- When expressing risks articulate the cause, event and effect aspects.

Cause, Event, Effect Relationship

A risk cause

may result in → A risk event

which may affect → An objective
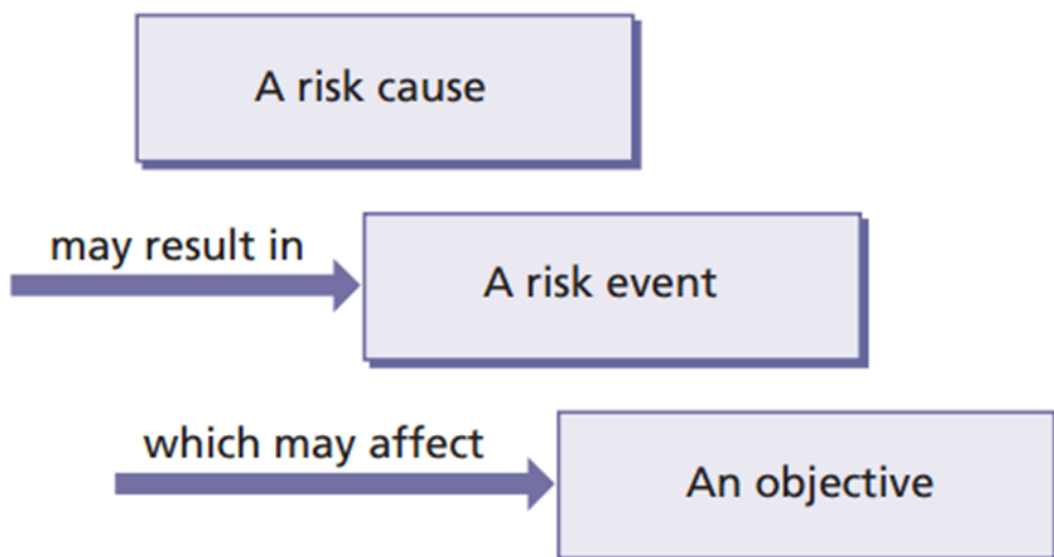
(Figure 8.4 Managing Successful Projects with PRINCE2® 2017 edition).

Assess-Estimate

- The estimating step addresses the risks in terms of probability, impact and how quickly the risk is likely to materialize if no action is taken (proximity).

- Some risk estimating techniques include:
  - Probability trees
  - Expected value
  - Pareto analysis
  - Probability impact grid

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Sample: Probability Impact Grid

	0.9	Very high 71–90%	0.045	0.09	0.18	0.36	0.72
	0.7	High 51–70%	0.035	0.07	0.14	0.28	0.56
Probability	0.5	Medium 31–50%	0.025	0.05	0.10	0.20	0.40
	0.3	Low 11–30%	0.015	0.03	0.06	0.12	0.24
	0.1	Very low 10% or less	0.005	0.01	0.02	0.04	0.08
			Very low	Low	Medium	High	Very high
			0.05	0.1	0.2	0.4	0.8
			Impact				

(Figure 10.3 Managing Successful Projects with PRINCE2® 2017 edition).

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Sample: Summary Risk Profile

Prob. / Impact	Very low	Low	Medium	High	Very high
Very high				❶ ❸	
High	⓫				❹
Medium		❽		❻	
Low		❿		❼	
Very low	❾		❷		❺

- - - - - Risk tolerance line   (Figure 10.4 Managing Successful Projects with PRINCE2® 2017 edition).

Assess-Evaluate

- The evaluating step focuses on assessing the net affect of all risks identified when aggregated together.

- Allows an assessment of the overall risk severity to the project.

- Overall severity can be compared to the risk tolerance.

- Risk models and expected monetary values are two risk evaluation techniques.

Sample: Expected Monetary Value

Risk ID	Likelihood (%)	Impact (£)	Expected value (£)
1	60	20,000	12,000
2	30	13,000	3,900
3	10	4,000	400
4	5	10,000	500
Expected monetary value			16,800

(Table 10.2 Managing Successful Projects with PRINCE2® 2017 edition).

- Risk ID 1 calculation: .6 X 20,000 = 12,000
- The EMV is 60% of the total impact value

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Plan

- The planning step ensures a proactive approach to dealing with risks.
- It reduces the probability that the project will be unable to respond when identified risks materialise.
- By identifying and evaluating response options to threats and opportunities, planning can ensure a balanced, value for money response to risks.
- Responses are built into the appropriate level of plan, with a provision made for any fall-back plans.

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Risk Responses

Opportunity	Treat
Exploit	Avoid
Reduce	Enhance
Transfer	
Share	
Accept	
Prepare Contingency Plans	

Implement

- The implementation ensures that the risk responses are actioned, monitored for effectiveness and, when ineffective, corrective action is taken.
- Clear roles and responsibilities must be assigned and documented in the risk register.
- The individual assigned to manage, monitor and control a risk is the risk owner.
- Risk owners are also responsible for implementing responses.
- An individual assigned to carry out a risk response is called the risk actionee.
- Risk actionees support and take direction from risk owners.
- The risk owner and risk actionee can be the same person.

Communicate

- Communication is central to an effective risk management process.
- Risk related information should be flow efficiently and effectively within the project and between external stakeholders and the project.
- Methods for exchanging information must be clearly defined in the Communication Management Approach.
- Communication must be an ongoing and dynamic process.
- Many management products may be used to communicate risk, however, these should be augmented with other methods.

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Risk Budget

- Some projects set aside a sum of money in the project budget to fund specific responses to project risks.
- Risk budgets are used over the course of the project as defined in the Risk Management Approach.
- The risk budget should take into consideration impact costs, response costs and the likelihood of risks occurring.
- The budget should consider the known and include a provision for the unforeseen.

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Remember!

- Risk appetite, risk exposure and risk tolerance are related to each other, but are not the same.
- **Risk exposure**: The extent of risk borne by the organization at the time.
- **Risk tolerance**: The threshold levels of risk exposure that, with appropriate approvals, can be exceeded, but which when exceeded will trigger some form of escalation.
- **Risk appetite**: An organization's unique attitude towards risk-taking that in turn dictates the amount of risk that it considers acceptable.

Minimum Requirements

- Create a risk management approach covering:
  - how risks are identified and assessed, how risk management responses are planned and implemented and how the management of risk is communicated throughout the project lifecycle
  - assessing material impact of risks on the business justification of the project (Continued Business Justification)
  - roles and responsibilities for risk management (Defined Roles and Responsibilities)
- Maintain some form of risk register.
- Ensure that project risks are identified, assessed, managed and reviewed throughout the project lifecycle.
- Use lessons to inform risk identification and management (Learn from Experience).
- Create and maintain a risk register.
- Both management products should be created during the initiating a project process.

Lecture 6

- Change Theme

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The *purpose* of the *Change theme* is to identify, assess and control any potential and approved changes to baselined products.

CHANGE THEME

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Change Defined

- Change is inevitable and therefore projects need a systematic approach to identifying, measuring the impact of, and controlling possible changes.
- Issue and change control is a continual activity that ensures every change is dealt with in a common manner.
- Changes are identified as 'issues' and cover any relevant event that has happened, was not planned and requires management action.
- Issues may be raised at any time during the project by anyone with an interest in the project or its outcome.

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Issues

- Any relevant event that has happened, was not planned, and requires management action.
- Issues can be:
  - Request for change
  - Off-specification
  - Problem or Concern

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Examples of Issues

Types of issue	Definition	Examples
Request for change	A proposal for a change to a baseline.	The senior user would like to increase the capacity of a product from 100 to 150 users.
Off-specification	Something that should be provided by the project, but currently is not (or is forecast not to be). It might be a missing product or a product not meeting its specifications.	Advice from a supplier that they can no longer deliver one of the products specified by the customer.
Problem/concern	Any other issue that the project manager needs to resolve or escalate.	Advice from a team manager that a team member has been taken ill and as a result the target end date for a work package will slip by a week. Notification that one of the suppliers has gone bankrupt, resulting in the need to identify and engage a new supplier.

(Table 11.1 Managing Successful Projects with PRINCE2® 2017 edition).

Baselines

- At a point in time, management and specialist products will be in a known state or 'baseline'.

- PRINCE2 defines a baseline as a reference level against which an entity is monitored and controlled.

- Baselines are created at a point in time for a purpose.

- A change to a baselined product creates a new version of the product.

Change Control

- PRINCE2 recommends an issue management & change control approach but any approach that meets the minimum requirements is following PRINCE2.
- Change control ensures changes to baselined products can not take place without the agreement of the relevant change authority.
- Changes can be approved, rejected, deferred.
- Configuration items are a component of a product, a product itself or a set of products that make up a release.
- A release is a set of products that are delivered to a user as a single item.

Change Authority

- Project board is responsible for reviewing and approving requests for change and off-specifications.
- Where few changes are envisaged, reasonable to leave authority with the project board.
- Where there may be many changes, the board may choose to delegate some decisions to a person or group, called the change authority.
- Majority of changes will be at work package level.
- Important to ensure change authority for work packages has sufficient authority so that changes without escalating to the project board for approval.

Change Budget

- A sum of money the customer and supplier agree will be used to fund the cost of requests for change, and possibly analysis costs.
- Unless forecasted change is low, a budget should be set up.
- Can reduce number of trivial exceptions.
- Provides more realistic expectation of overall costs/timeframe.
- Where budget is given to a change authority, board may put a limit on (a) the cost of any single change, and (b) the amount spent in any one stage.
- If used, the change budget is documented in the relevant plan.
- The project board should decide the need for a change budget.

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Key Management Products

- Change Control Approach
- Configuration Item Records
- Issue Register
- Issue Reports
- Product Status Account

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Change Control Approach

- Used to identify, assess and control any potential and approved changes to project baselines.

- Describes procedures, techniques & standards to be applied and the responsibilities for achieving an effective issue management and change control procedure.

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Configuration Item Records

- Created only if required by the project's change control approach.
- Provide a record of history, status, version and variant of each configuration item.
- Gives details of important relationships between configured items.
- A set of configuration item records for a project is often referred to as a configuration library.
- PRINCE2 does not define the composition, format and presentation or quality criteria for this product.

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Issue Register

- Used to capture and maintain information on all the issues that are being formally managed.

- Should be monitored by the project manager on a regular basis.

- The composition of the issue register will be defined in the change control approach.

Issue Reports

- Report containing description, impact assessment & recommendations for a request for change, off-specification or a problem/concern.
- Created only for issues handled formally.
- Initially created when capturing the issue, updated after the issue has been examined and when proposals are identified for issue resolution.
- Amended further to record what option was decided upon.
- Finally updated when implementation has been verified and issue is closed.

Product Status Account

- If required by the change control approach, used to provide information about the state of products.
- Particularly useful if project manager wishes to confirm the version number of products.
- May be derived from:
  - configuration item records
  - a stage plan.
- PRINCE2 does not define the composition, format and presentation or quality criteria for this product.

Issue & Change Control Procedure
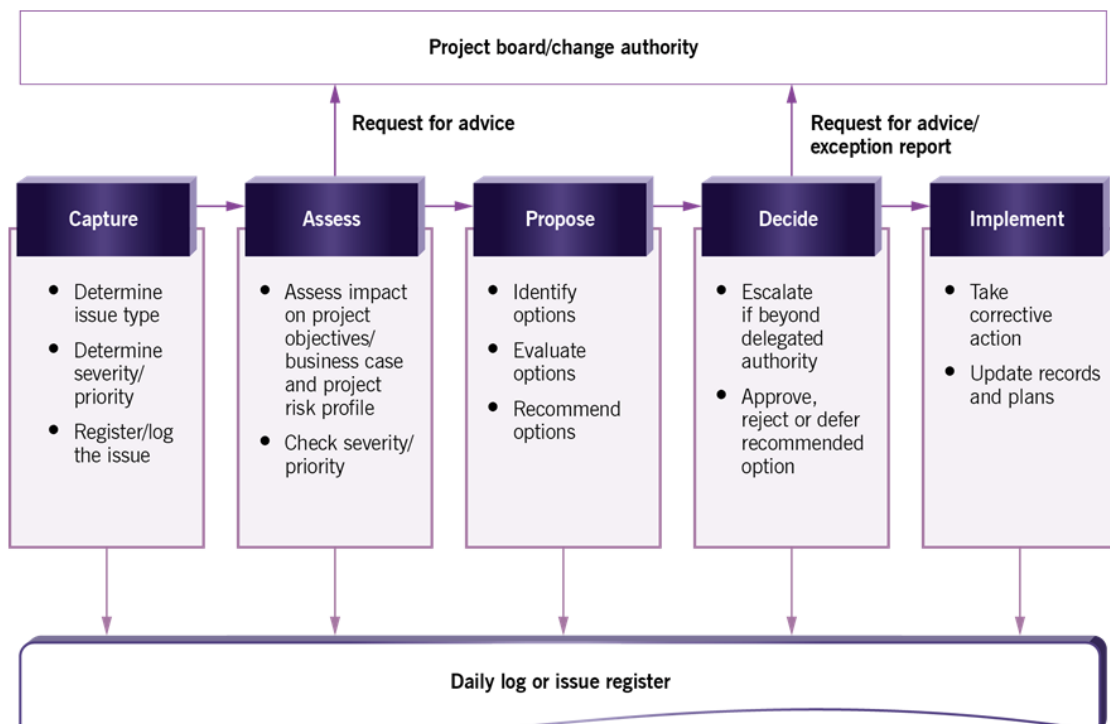
(Figure 11.1 Managing Successful Projects with PRINCE2® 2017 edition).

Minimum Requirements

- A defined change control approach covering:
  - how issues are identified and managed
  - determining any material impact on business justification (Continued Business Justification)
  - roles and responsibilities for change control including a defined change authority (Defined Roles and Responsibilities).
- Define how product baselines are created, maintained and controlled.
- Create and maintain some form of issue register.
- Ensure that project issues are captured, examined, managed and reviewed throughout the project lifecycle.
- Use lessons to inform issue identification and management (Learn from Experience).

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Lecture 7

- Progress Theme

The *purpose* of the *Progress theme* is to establish mechanisms to monitor and compare actual achievements against those planned; provide a forecast for the project objectives and the project's continued viability; and control any unacceptable deviations.

PROGRESS THEME

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Progress Theme

- Measure of the achievement of the objectives of a plan.
- Controlling progress is central to project management, ensuring that the project remains viable against its approved business case.
- Progress control involves measuring actual progress against the performance targets of time, cost, quality, scope, benefits and risk.
- Information used to take actions or make decisions on:
  - approving a management stage or work package
  - escalating deviations
  - prematurely close the project.
- Progress can be monitored at work package, management stage and project level.

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Progress Controls

Progress controls ensure that for each level of the project management team the next level of management can:

- Monitor progress.
- Compare level of achievement with plan.
- Review plans and options against future situations.
- Detect problems and identify risks.
- Initiate corrective action.
- Authorize further work.

Approach to Progress

- Delegating Authority from one level of management to the level below.
- Dividing the project into management stages, authorizing stages one at a time.
- Event-driven and time-driven reporting.
- Raising exceptions.
- All project controls must be documented in the Project Initiation Documentation.

Exceptions and Tolerances

- Tolerances are permissible deviations above and below specific targets.
- Projects must have tolerances for time and cost in order to manage by exception.
- Tolerances may also be applied to risk, quality, scope and benefits.
- Exceptions are situations where the forecast predicts a deviation outside the agreed tolerance levels.

Six Tolerance Levels

Tolerance areas	Project level tolerances	Stage level tolerances	Work Package level tolerances	Product level tolerances
Time +/- amounts of time on target completion dates	Project Plan	Stage Plan	Work Package	NA
Cost +/- amounts of planned budget	Project Plan	Stage Plan	Work Package	NA
Scope Permitted variation of the scope of a project solution, e.g. MoSCoW prioritization of requirements (Must have, Should have, Could have, Won't have for now).	Project Plan (note 1)	Stage Plan (note 1)	Work Package (note 1)	NA
Note 1 – the scope of a plan is defined by the set of products to be delivered. Scope tolerance (if used) should be in the form of a note on or reference to the product breakdown structure for the plan. Scope tolerance at the stage or Work Package level is of particular use if applying a time-bound iterative development method such as Agile.				

(Based on Table 12.1 Managing Successful Projects with PRINCE2® 2017 edition).

Six Tolerance Levels (cont'd)

Tolerance areas	Project level tolerances	Stage level tolerances	Work Package level tolerances	Product level tolerances
Risk Limit on the aggregated value of threats (e.g. expected monetary value to remain less than 10% of the plan's budget); and Limit on any individual threat (e.g. any threat to operational service)	Risk Management Strategy	Stage Plan (note 2)	Work Package (note 2)	NA
Quality Defining quality targets in terms of ranges, e.g. a product that weighs 300g +/- 10g	Project Product Description	NA (note 3)	NA (note 3)	Product Description
Benefits Defining target benefits in terms of ranges, e.g. to achieve minimum cost savings of 5% per branch, with an average of 7% across all branches	Business Case	NA	NA	NA
Note 2 – more specific stage level risk tolerances may be set by the Project Board when authorizing a stage or by the Project Manager when commissioning Work Packages, especially from external suppliers.				
Note 3 – quality tolerances are not summarily defined at the stage or Work Package level but are defined per Product Description within the scope of the plan.				

(Based on Table 12.1 Managing Successful Projects with PRINCE2® 2017 edition).

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Allocation of Tolerances

- Corporate, programme management or the customer sets overall tolerance levels for the project.
- Project board has overall control at a project level, allocates tolerances for each management stage to the project manager.
- Project manager has day-to-day control for a management stage within the tolerance limits laid down by the project board.
- Team manager has control for a work package within the work package tolerances agreed with the project manager.
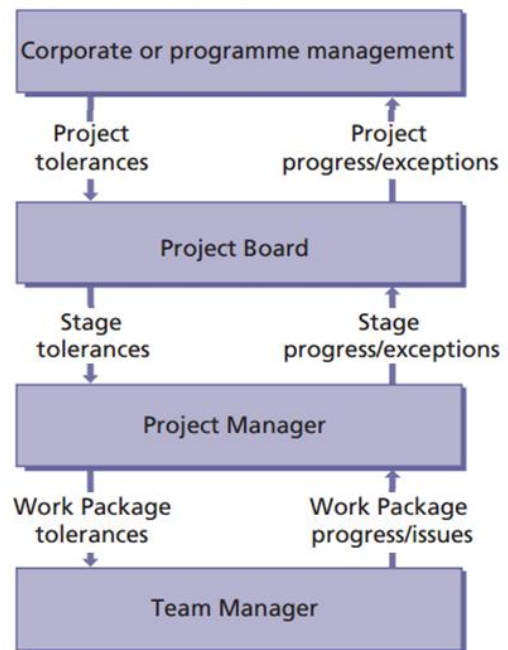
Delegating Authority

- Four levels of management.
- Six tolerances used to manage by exception.
- Project controls:
  - Authorisations
  - Progress updates
  - Exceptions and changes

(Based on Figure 12.1 Managing Successful Projects with PRINCE2® 2017 edition).

Event-driven and Time-driven Controls

- Event-driven controls take place when a specific event takes place. These are decision making controls.
- Time-driven controls take place at specified intervals. These are monitoring and reporting controls.
- The baseline for establishing progress controls comes from the Project Plan, Stage Plans, Exception Plans, and Work Packages.
- Checkpoint reports, registers, and logs are used by the PM to review progress.
- Lessons Log and Lessons Learned Report are management products used to capture and report lessons when reviewing progress.

Raising Exceptions

- Work Package level exceptions are raised by the Team Manager when Work Package tolerances are forecasted to be exceeded. Documented by raising and logging an issue.
- Stage level exceptions are raised by the Project Manager when stage or project tolerances are forecasted to be exceeded. Documented by raising an Issue and submitting an Exception Report to the Project Board.
- An Exception Report describes the exception situation, its impact, options, recommendations and impact of the recommendations.
- Project level exceptions are raised when project level tolerances are forecasted to be exceeded and are reported to corporate, programme management or customer.

Reporting Progress

- Frequency of reporting should reflect level of control required.
- Level of control may vary from stage to stage.
- Factors influencing the level of control include management team experience, complexity of the stage, risk, etc.
- Management products used for progress reporting are:
  - Checkpoint Report: used to report, at a frequency defined in the work package, the status of the work package.
  - Highlight Reports
  - End Stage Report
  - End Project Report

Highlight Report

- Used by project manager to provide project board (and possibly other stakeholders) with a summary of management stage status at intervals defined by them.

- Project board uses report to monitor management stage and project progress.

- Project manager also uses it to advise the project board of any potential problems or areas where the project board could help.

End Stage Report

- Prepared by the Project Manager and submitted to the project board.

- Provides summary of progress to date, project situation, & information for project board decisions on what to do next with the project.

- Project board uses end stage report and next stage plan to decide what action to take with the project; (authorize next stage, amend project scope or stop the project).

End Project Report

- Used during project closure to review how the project performed against the version of the PID used to authorize it.
- Also allows the passing on of:
  - lessons that can be usefully applied to other projects.
  - details of unfinished work, ongoing risks or potential product modifications to the group charged with future support of the project's products in their operational life.

Other Management Products

- Daily Log
- Lessons Log
- Lessons Report
- Work Package

Daily Log

- Used by project manager to record informal issues, required actions or significant events not captured by other registers or logs.

- Acts as the project diary for the project manager.

- Also used to log issues and risks during the starting up a project process if other registers have not been set up.

- Team managers may elect to have one for their work packages, separate from the project manager's daily log.

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Lessons Log

- Project repository for lessons that apply to this project or future projects.

- May originate from other projects and should be captured in lessons log for input to the project's approaches and plans.

- May originate from within the project, where new experience (both good and bad) can be passed on to others.

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Lessons Report

- Created at any time in a project to:
  - support lessons log if more information is needed.
  - pass on lessons that can be applied to other projects.
  - provoke action to embed positive lessons in the organization's way of working.
  - to help avoid negative lessons on future projects.
- Can be included in end stage report and end project report.
- May be necessary for there to be several lessons reports specific to the particular organization.
- Data used by the corporate group responsible for QMS, to refine, change and improve standards.
- Statistics on effort can help improve future estimating.

Work Package

- A set of information about one or more products.
- Assembled by the project manager.
- Used to formally pass responsibility for work or delivery to a team manager or team member.

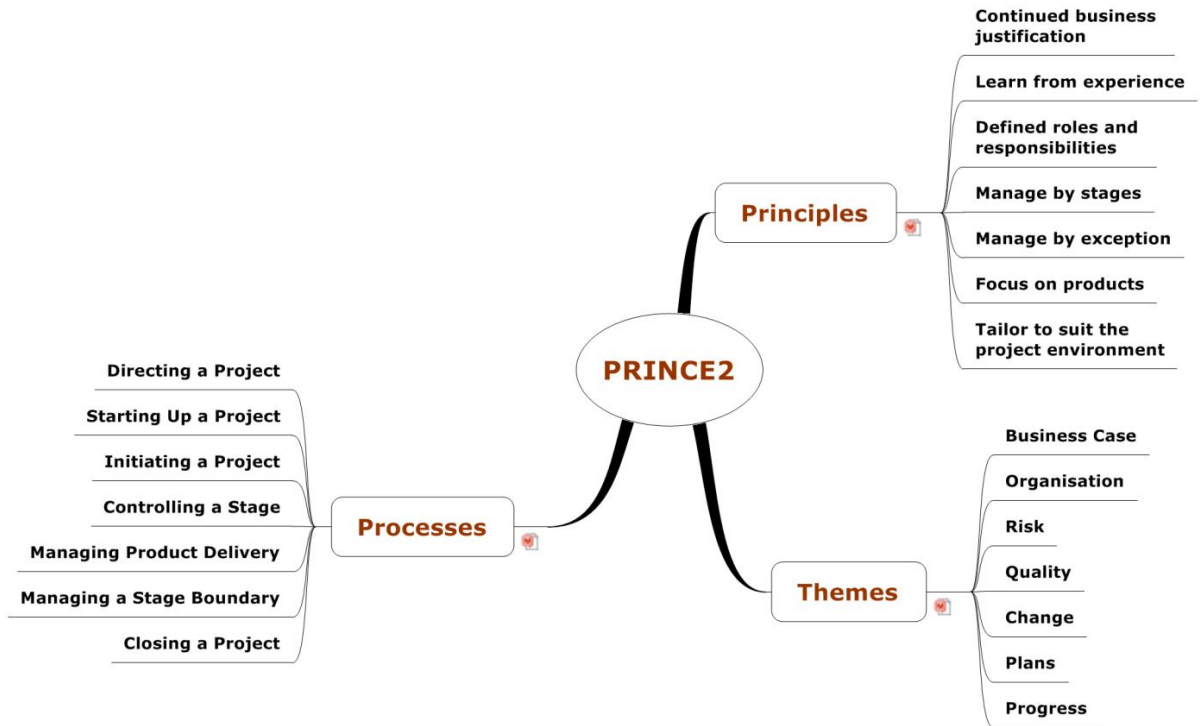# Minimum Requirements

- Define its approach to controlling progress in the Project Initiation Documentation.
- Be managed by stages (Manage by Stages).
- Set tolerances and manage by exception against these tolerances (Manage by Exception).
- Review the business justification when exceptions are raised (Continued Business Justification).
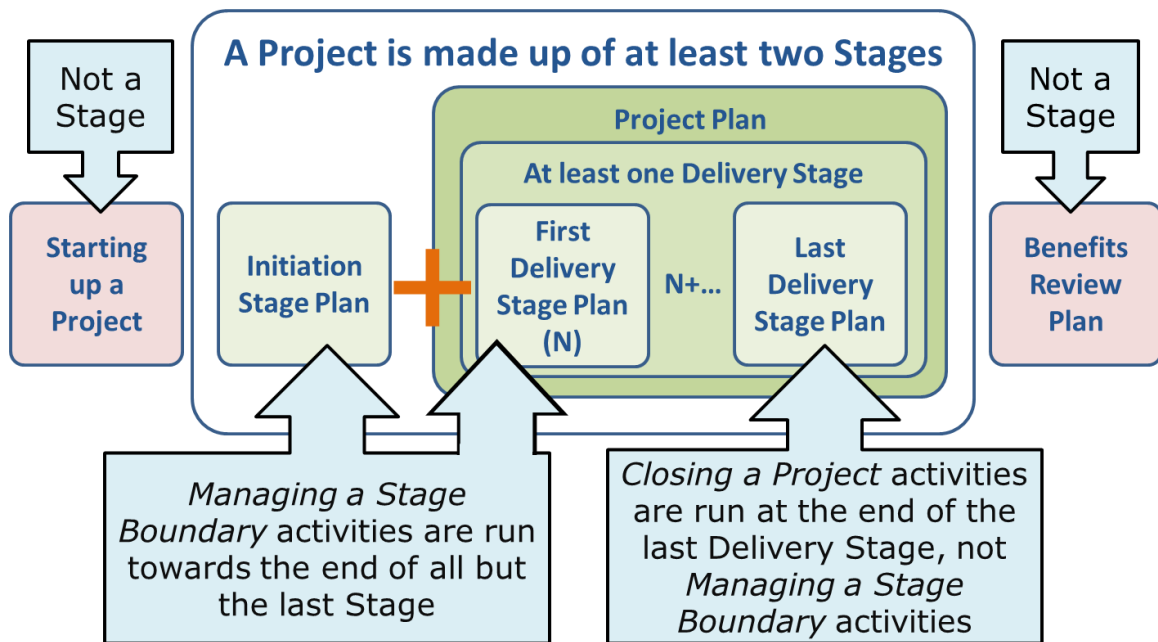- Learn lessons (Learn from Experience).

Section V - Visual Aids

1   PRINCE2 ELEMENTS

2   PRINCE2 MANAGEMENT BY STAGES