PRINCE2
Foundation

User Guide

Version 11.03.05

Contents

Foreword

Key Skills is a leading developer and distributor of multimedia training products who specialise in the area of project and programme management.

PRINCE2 Foundation uses the very latest multimedia educational techniques to provide a learning environment which is stimulating, easy-to-use and stress-free.

The aim of this course is to take students with little or no knowledge of PRINCE2 to the level where they could take the Foundation (Part 1) examinations with a high degree of confidence in achieving a pass. The examination within the course package uses previous examination questions that are accessed at random to provide an accurate simulation of the real thing.

We hope you enjoy the course and that you find it a useful starting point in your PRINCE2 training programme.

Section 1: Hardware/Software Pre-requisites

For optimum performance, you should operate this multimedia course on a computer with the following minimum specification:

> Pentium P100 Processor
> 16 mb RAM
> 8x CD-ROM drive
> Sound-card & speakers
> SVGA Monitor (NB The course uses 800x600 resolution)
> Mouse/Pointing device

A 32-bit Windows® operating system is also needed.

Section 2: Installation Procedure

2.1 From CD-ROM (Single User)

Place the CD in your CD drive and run *START.EXE*.

START.EXE will run the course directly from your CD-ROM drive and no runtime files will be copied to your hard disk drive.

2.2 Network Instructions

Subject to bandwidth and licensing terms, this multimedia training course can be installed and operated over a local area network or a corporate Intranet.

There are a number of ways in which installation and operation can be effected and you should contact Key Skills Technical Support Section for advice.

Any problems, please call us on 01270 611600.

Section 3: Operating the Software

3.1 Sign-On Procedure

To start the course, double click on the course icon and the program will commence, with music and introductory title screen.

Once you have passed the title screen and copyright notices you will be asked to identify yourself to the system.

If you are new to the course you must enter your name/identification and then confirm this to the system. If you have used the course previously be sure to use the same name, otherwise your bookmarks within the course will be invalid.

3.2   The User Interface

Once sign on is completed you will be presented with the main menu which looks like this:
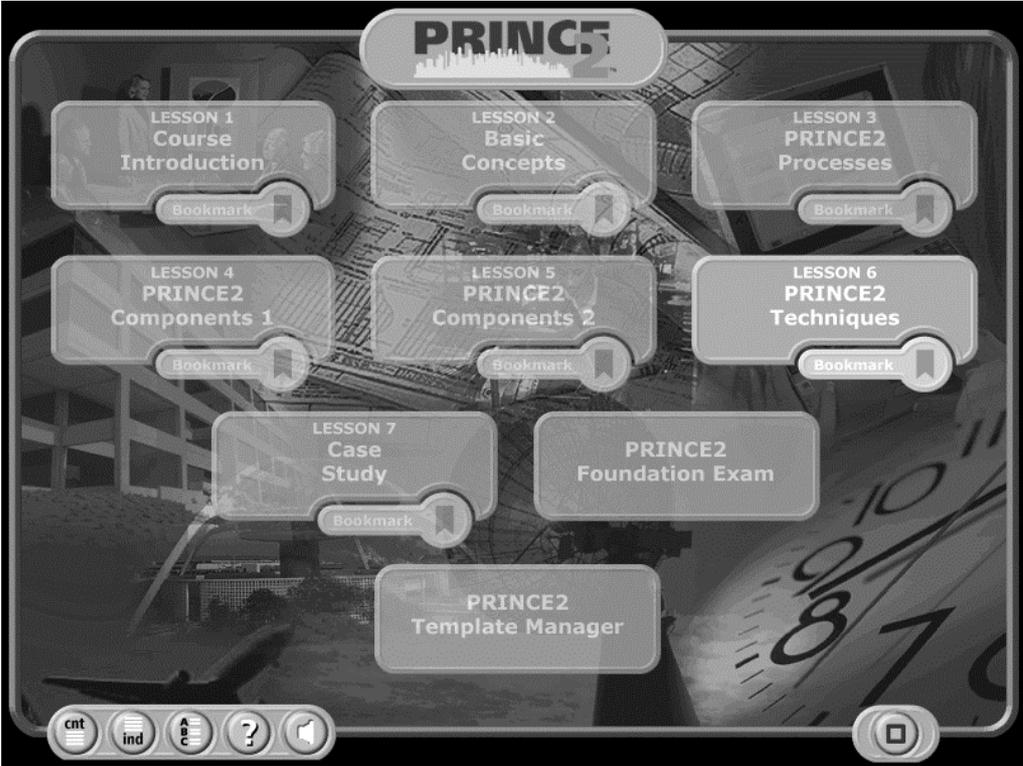
Each lesson is represented by one of the "panes" on the menu screen, for example:
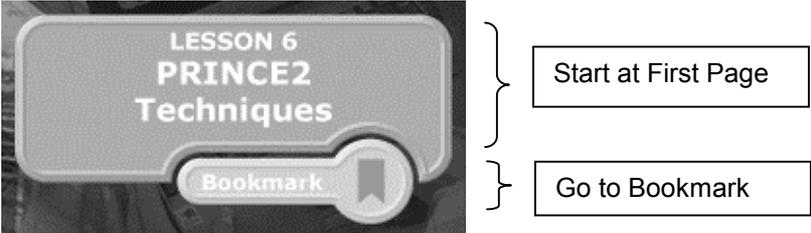
Each of these lesson panes is divided into two distinct areas. If you click on the upper area of each pane then you will be taken to the start of the corresponding lesson.

The lower key-shaped pane is the bookmark area and a red flag will appear in this area to show whether you have part or fully completed the corresponding lesson. By clicking in the bookmark area you will be taken to your last point of study within the corresponding lesson.

Note: The bookmarking system is switched off as soon as you move around the course using either the Index or the Contents buttons at the bottom of each page.

Throughout the course, the main user controls are located at the bottom of the screen, and their functions are as shown below:

Newcomers to the course will gain most benefit from starting at the beginning of the first lesson and working their way through, sequentially, to the end. However, the package is also a valuable source of reference and it is possible to re-visit specific lessons, or parts of a lesson, at any time. The Contents and Index facilities are particularly useful for browsing in this way.

Section 4: Course Notes

4.1 An Introduction to PRINCE2

Welcome to this multimedia training course in the PRINCE2 project management method.

In this first lesson we will be looking at what PRINCE2 is and what it sets out to achieve.

We will also be looking at the history of PRINCE2 and considering the business benefits which the application of PRINCE2 can bring about.

A good starting point to answering the question "What is PRINCE2?" is to understand exactly what PRINCE2 is not:

- PRINCE2 is not a piece of computer software.
- PRINCE2 is not a planning tool, in the way that Microsoft Project is, for example.
- PRINCE2 is not carved in tablets of stone - it is designed to be flexible to meet particular circumstances.
- PRINCE2 is not, like some of its predecessors, unnecessarily bureau-cratic or cumbersome.
- PRINCE2 is not restricted to large IT projects - it can be applied across the board to projects of all kinds.
- PRINCE2 is not a guarantee of successful project outcomes - but it certainly can help prevent embarrassing and costly project disasters.

So, if PRINCE2 is none of these things, what exactly is it?

At its most basic level, PRINCE2 is a book, which is produced by the UK government's Office of Government Commerce – or OGC - and which entirely describes a structured method for approaching, managing and closing down a project of any type or size.

Notice that we now talk about the PRINCE2 Method - thankfully the word "Methodology" is now out of fashion!

As its name suggests, PRINCE2 is not the first attempt to produce a standardised approach to managing projects.

In fact the origins of PRINCE2 go back to 1975 when a company called Simpact Systems Limited developed a method called PROMPT in order to provide a framework for the management of large IT projects.

In 1984 the UK government adopted PROMPT and mandated its use for managing the many large IT projects that were being run in various government departments.

At the time – the Central Computer and Telecommunications Agency – or CCTA - had the responsibility for implementing PROMPT and promoting its usage within government IT circles.

During 1987 the CCTA determined that it was necessary to produce an updated PROMPT in order to reflect actual usage and to incorporate modern project management ideas - such as product-based planning, Quality Management and Open Life-Cycle Planning.

The result of this updating exercise was the release of PRINCE in 1989…

Prince is an acronym of **PR**ojects **IN C**ontrolled **E**nvironments and one of the reasons why the name PROMPT was not retained was that it allowed the CCTA to declare PRINCE a public-domain product.

This meant that anyone could use PRINCE without payment of licence fees or royalties. The only expense was the purchase of the manuals themselves and any associated training which might be required.

Prince was hugely successful in improving the quality of IT project management in government circles and it also found application in many large private sector IT departments.

However, a need was identified for a slimmed-down version of the method - original PRINCE consisted of 5 fairly weighty manuals - and for a method that was more generally applicable to smaller, non-IT projects.

So the CCTA funded a major collaboration project, involving a number of external organisations, and the result was PRINCE2, which was launched in October 1996.

In 2001 the CCTA became the Office for Government Commerce or OGC – and you will probably still come across references to the CCTA on old documents. Also during 2001, a third update to the manual was released.

Whilst PRINCE2 is a copyrighted product of the OGC - and the PRINCE2 logo is their registered trademark, the principle of a public-domain method has been maintained and the only cost of implementation for PRINCE2 is the purchase of the manuals and staff training.

To help promote PRINCE2, the OGC collaborate with a number of organisations, such as The Stationery Office who physically produce the manuals and the APM Group who sell the manuals and co-ordinate the various training and examination bodies.

The original impetus for producing PRINCE was a number of widely reported and very expensive failures in large public sector IT projects.

In fact the reported failures were only the tip of a very large iceberg. A number of surveys have shown that the failure rate for projects across all sectors is around 80%.

In other words only 20% of projects can be said to achieve the original objectives, on time and within budget.

The reasons for such failures are many fold, but can generally be categorised into:

- The lack of a sound business case for embarking on the project.
- Lack of understanding of the expected end-products or deliverables.
- Lack of an appropriate management structure with clearly defined roles and responsibilities.
- Failure to plan, monitor and control the activities which make up the project.
- Failure to communicate plans and progress against those plans to all the project stakeholders.
- Inadequate systems for managing Risk, Change and Quality throughout the project.

PRINCE2 addresses the reasons for project failures, which we have just discussed, by:

- Mandating that project be based on a well thought-out business case which balances the expected benefits of the project against the risks and cost involved.
- Focussing attention on the quality of the products that the project is set up to deliver.
- Providing a communication medium for all staff involved in the project.
- Ensuring that work progresses in the correct sequence and that progress is easily visible to management.
- Allowing the project to be stopped and, if required, re-started entirely under management control.

In addition to these major benefits in terms of improving project performance, PRINCE2 also has the advantage being a public-domain method, making it free to use.

The fact that PRINCE2 has become the de facto standard for managing all kinds of project means that knowledge and practical skills in the application of PRINCE2 are widely available in the jobs marketplace.

In fact PRINCE2 is so widely used that there is a well-established User Group, dedicated to the support, promotion and strengthening of the method.

Whilst most projects of any size these days will almost always involve the use of a computerised planning tool, PRINCE2 does not mandate their use.

All that PRINCE2 says is that planning must be done - it doesn't dictate how it should be done.

In fact, it is generally true of PRINCE2 that it tells you what should be done and why it should be done - but it stops short of telling you how to do it.

PRINCE2 is not prescriptive, it is descriptive, and it is designed to be interpreted and applied according to the needs of the project under consideration.

4.2 Basic Concepts

This lesson sets out to explain the fundamental concepts on which the PRINCE2 method is based.

In order to successfully complete any significant job of work there are four main aspects that need to be considered, namely:

- The Method to be used - in other words how will you approach the job? How will the work be organised? What are the main factors that need to be accounted for? Who will have responsibility for what? How will progress be monitored and communicated?
- Procedures - which are effectively the job instructions saying exactly what must be done, and the order in which things must happen.
- Techniques - the "tricks-of-the-trade" or the skills that need to be employed to get the work done.
- Tools - which are the aids used to facilitate or expedite the work.

If the job in hand was the assembly of a flat-packed cupboard, for example, you probably would not have a written down method - but informally you would have gone through a process of justifying the need for the cupboard and deciding where and by whom the work would be carried out.

The Procedure for this job would be the written instructions that the manufacturers include inside the flat-pack. These tell you what to do and in what order to do it.

The Techniques you use for this job may be very basic do-it-yourself skills such as assembly, gluing, nailing and screw driving.

The Tools for the job may be just a hammer and a screwdriver.

Now, instead of a small cupboard, lets scale things up a little. Imagine that the project was the construction of a large prefabricated building.

This project would require a significant investment and involve many people with different skills.

Because of this a more formalised approach would be required and so you may decide to use PRINCE2 as the method for the job.

PRINCE2 would ensure that you had produced a sound business justification for the building and assist you in setting up the management structure and defining roles and responsibilities.

PRINCE2 would also provide you with a set of management procedures or processes to guide you all the way through the project from beginning to end.

Notice that PRINCE2 does not, and cannot provide the detailed job-instructions or procedures specific to the project - but it does guide you in their production.

Many different techniques would be required for such a project - some of the management techniques would be fairly general but there would also be a whole host of techniques specific to the construction industry.

PRINCE2 does not set out to define all the techniques of project management - but it does recommend some key ones - particularly the use of Product-Based Planning as a means of maintaining objectivity throughout the project.

Other project management techniques such as Networking, Critical Path Analysis and Gantt Charts would probably be used on a project like this - but PRINCE2 does not define or mandate them - it just says that such techniques must be chosen and used as appropriate.

In addition to the project- specific tools such as cranes, diggers and so on, there may also be a need for management tools such as computers and associated software.

PRINCE2 does not include or mandate the use of any tools - other than to say they should be selected and used as required.

MS-Project, together with the many other commercially available computer-based planning packages, would be classed as a tool - used in support of the project.

PRINCE2 does not specify the use of such tools, but it does recognise that most projects these days do make use of computer-based planning aids.

So lets now take a more detailed look at the make-up of PRINCE2 and see how it relates to the four aspects of work which we have just been discussing.

The first thing to understand about PRINCE2 is that it does not exist or operate in isolation from the rest of the organisation.

Each company will have its own sets of standards and practices. There will often be an ISO9000 certified quality management system in operation, as well as established best-practice, experience and commonsense procedures.

All of these act as a foundation on which PRINCE2 must be installed when it is adopted by an organisation.

Given these environmental factors, the next base on which PRINCE2 is founded is the need for a Business Case for any project. This must carefully assess the business benefits that could reasonably be expected to accrue from the project and weigh these against both the risks and the anticipated costs of the venture.

This focus on the business case means that PRINCE2 starts long before work on the project itself starts. This high-level preliminary work is an essential prerequisite for avoiding one of the main reasons for project failure - a project that was never worth doing in the first place.

There are then three main elements that make up the PRINCE2 method in its entirety.

1) PRINCE2 Processes

These are the management procedures which PRINCE2 defines, running from the conception of the project right through to its final completion and close-down.

PRINCE2 identifies eight major processes:

i.   Starting Up A Project - which PRINCE2 abbreviates to SU for referencing purposes. This is a pre-project process that sets out to answer the question "Do we have a worthwhile and viable project?" before seeking commitment of resources.
ii. The Directing a Project Process, DP - runs from the end of the Starting Up process right through to the project's end and final close-down. This process is aimed exclusively at the Project Board as defined within the Organisation component.
iii. Initiating a Project - or IP as it is referenced - is aimed at ensuring that a firm baseline exists for the project and that everyone involved understands what the project is seeking to achieve.
iv. Controlling a Stage - encompasses the basic every-day project management processes of authorising work, monitoring progress and reporting to senior management.
v.   Managing Product Delivery - is the main workshop of the project and it is here that the majority of resources are consumed. It is here that the products of the project are created.
vi. Managing Stage Boundaries - is designed to provide the Project Board with information at key decision points, to enable them to decide on whether to allow the project to proceed to the next stage or not.
vii. Closing a Project process - is aimed at executing a controlled and orderly close to the project, either at its natural end or at premature close. One of the outputs from this process will be a Lessons Learned Report, which can provide valuable information for future projects.
viii. Planning process, PL - provides everybody involved in the project with information on what is required, how it will be achieved, what resources will be used and when things will happen.

Planning is a repeatable process and plays and important role in many of the other processes.

2) PRINCE2 Components

PRINCE2 identifies eight components as being the essential ingredients for any successful project. They are:

i.   A Business Case – as we have seen the business case for a project forms part of its very foundation. It is the most important set of information for a project and drives the decision making process. It is used continually to

ensure that the project's progress is aligned with the business objectives.

ii.   An Organisation - defining all the roles, responsibilities and relationships for the people involved in managing and executing the project.

iii.   Plans - which are the backbone of the management information system that is required for any project. PRINCE2 is very concerned with the different levels of plan that need to be produced and the approvals that are required before plans are put into action.

iv.   Controls - which are necessary to ensure that the project is producing the right products, at the right time and that the project remains viable against the business case.

v.   The Management of Risk - since Risk is such a fundamental consideration within the business case, PRINCE2 identifies the Management of Risk as a separate component in its own right.

vi.   Quality in a Project Environment - The emphasis that PRINCE2 places on products, or deliverables, means that it is easy to see the relevance of traditional quality management principles to the management of projects.

vii.   Configuration Management - which is concerned with the systems for tracking and controlling project products and documentation.

viii. Change Control - change in projects is inevitable, so PRINCE2 defines procedures for managing changes as they occur or become necessary. This can be a particularly crucial component in a multi-project or programme environment where changes to one project need to be accounted for in another.

Each of these eight components is considered in more detail in lessons 4.4 and 4.5.

3) PRINCE2 Techniques

PRINCE2 does not set out to provide a comprehensive set of project management techniques, but it does identify three specific techniques, which are important to PRINCE2 because of the way it approaches projects.

i.   Product Based Planning - including the use of Product Breakdown Structures,

Product Flow Diagrams and the creation of Product Descriptions.

ii.   Change Control Approach - not to be confused with the Change Control Component - which are the set of techniques for managing the inevitable changes that take place as the project progresses. Many organisations will have their own corporate change control procedures, which provided they do not conflict with PRINCE2, may be maintained and applied within the project environment.

iii.   The Quality Review technique - where a team of involved people meet with the objective of assessing a completed product for errors, omissions and non-compliance with the stated Quality Criteria.

The PRINCE2 Manual

The PRINCE2 Manual was subjected to its first major revision in 1998, when the ring-binder format was substituted with a bound book and the colour scheme was changed ever so slightly.

There were also a number of changes to the content in the 1998 revision - particularly to include more coverage of how PRINCE2 applies within a multi-project or programme environment.

A more major re-structuring took place in 2001 – with the format of the book being changed and the order of presentation also being amended.

However, the essential content and approach remained unchanged.

There are about 365 pages in the manual altogether, the first 30 or so of which deal with the contents listing and an introduction to the book and to the PRINCE2 method.

This is then followed by three main sections dealing in detail with the Process model and the eight major Processes, all eight Components, (which we have already seen) and then the three Techniques.

The last 60 or so pages of the manual are taken up with Glossaries, Appendices and information on where to go for additional help in understanding and implementing PRINCE2.

We have seen that PRINCE2 has a very clearly defined structure, so any project managed using PRINCE2 must also have a definite structure, with all PRINCE2 projects sharing certain characteristics.

For example, every PRINCE2 project:

- Has a clearly stated Business Case indicating the benefits and risks of the venture.
- Identifies an organisation structure with defined roles and responsibilities.
- Can demonstrate a properly defined and unique set of Products, or Deliverables.
- Has a corresponding set of activities and resources which are necessary to bring those products into being.
- Has a finite life-span with suitable arrangements for monitoring and control throughout the duration of that life-span.
- Includes a complete set of processes and associated techniques to help plan and control the project and bring it to a successful conclusion.

The Controls component mandates that a PRINCE2 project is divided into a number of Management Stages, each forming a distinct unit for management purposes.

These Management Stages run in sequence and do not overlap. They are separated by decision points or Stage Boundaries, enabling management to authorise or prevent progress on to the next stage.

The project stages correspond to the natural steps in the project life-cycle. Thus the Stage Boundaries are normally defined to correspond with the completion of major products and key decisions concerning commitment of resources.

PRINCE2 recognises that few projects are ever undertaken entirely in isolation. The output of one project may be used as the input to another. A number of projects may be sharing common resources.

In such a multi-project, or programme environment, PRINCE2 provides a mechanism for defining the boundary of the project and its relationship to other projects.

4.3 PRINCE2 Processes

We saw earlier in the course that PRINCE2 identifies eight management processes.

The objectives of this lesson are to explain how these processes fit together in an overall process model, to examine each of the main processes in some more detail, and to describe the information flows which exists between the different processes.

We need to take a step back at this point and consider what is meant by the word "process".

A "Process" is an operation or series of operations that transform something into something else. In other word, a process takes inputs and produces outputs.

We are all familiar with industrial processes. An oil refinery takes in crude oil as its input, and through the process of refining produces gas, petrol and refined oil as outputs.

A car plant would take in metal, and plastic, and various components and through the process of manufacturing output finished cars.

In general terms, industrial processes take in raw materials and output finished goods.

The processes in PRINCE2 are Management Processes and like industrial processes they have both inputs and outputs.

Typical inputs for a management process will be information or requests, and typical outputs would be updated information and decisions or approvals.

If your company has undergone ISO9000 certification you will be familiar with the concept of processes. One of the requirements of the ISO9000 standard is that all the major processes within an organisation, management or otherwise, should be documented in the company's Quality Manual.

The fact that PRINCE2 represents project management in terms of its processes is one of the reasons why it sits so comfortably within an ISO9000 approved quality management system.

So each of the eight processes within PRINCE2 has its own inputs and outputs - the

outputs from one process often being the inputs to one or more other processes.

And so PRINCE2 represents these processes in the form of a process model, showing the various inputs and outputs and how they are inter-related.
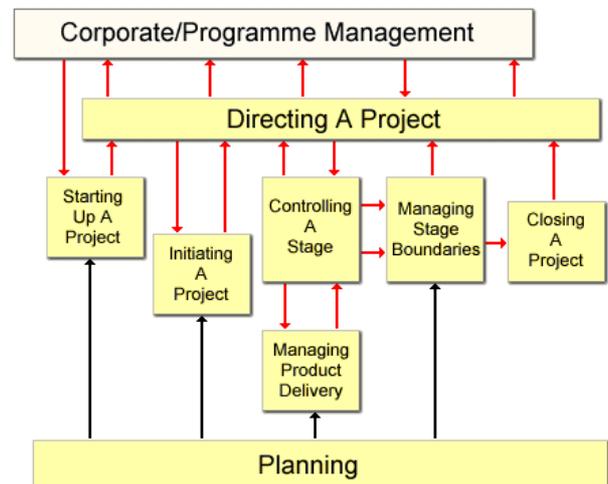
At the highest level is corporate or programme management. Whilst it is not part of project management as such, this higher management level is important and the need for a two-way communication process must not be forgotten.

Within the project itself, the highest level is Directing a Project - which is for key decision making and direction setting.

The next six processes divide logically into three broad areas:

Beginning a Project.
Managing A Project.
Finishing A Project.

Finally, the Planning Process runs throughout the project, providing input to all of the other processes.

Directing a Project and Planning are the two processes that are common to the other six processes, as you can see from the process model.

1) The Directing a Project Process

Directing A Project runs from the start of the project until it's very end and final Close-Down.

This process is aimed at the Project Board who should manage by exception, monitor

through reports provided by the Project Manager and control via a series of key decision points.

The key processes for the Project Board – including the five sub-processes within Directing a Project - can be grouped into:

- Initiation - starting the project off on the right foot.
- Stage Boundaries - commitment of further resources based on the results achieved so far.
- Ad-Hoc Direction - monitoring progress and providing advice and guidance.
- Project Closure - confirming the project outcome and bringing the project to a controlled close.

This process does not cover the day-to-day activities of managing the project, these rest with the Project Manager. A forecast that the current stage will not be completed within tolerance, for example, will result in an Exception Report being raised by the Project Manager for consideration by the Project Board.

The Project Board make decisions about whether the project is worthwhile, both initially and at any stage during its progress.

Day to Day management and control of resources that have been committed to the project is the responsibility of the Project Manager

2) The Starting Up a Project Process

The Starting Up A Project Process provides a solution to the "ragged beginning" problem that bedevils many projects. Often managers will be asked to carry out planning and preparatory work but are instructed not to commit any resources without authority. The Starting Up A Project process is how PRINCE2 seeks to overcome this dilemma.

The input to Starting Up a Project is the Project Mandate, which will often be in the form of a memo or an informal request. This is the "trigger" for the project.
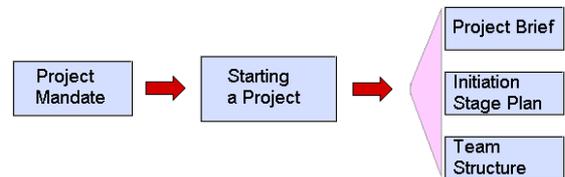
Although the Starting Up process should be very short, PRINCE2 identifies six sub-processes, as shown below:

The main output is the Project Brief - the aim of which is to allow the Project Board, in the Directing A Project Process, to decide if there is sufficient justification to warrant the expenditure being proposed in the Initiation Stage Plan.

The Project Brief should contain a statement of the project scope or project definition, an outline of the business case for the project, quality expectations and the known risks involved. Any other useful information should also be included.

There are two other outputs from Starting Up a Project. They are an Initiation Stage Plan and the structure for the Project Management team, with nominations for the Project Board Executive and the Project Manager.

3) The Initiating a Project Process

The Initiating a Project Process is aimed at ensuring that a firm Baseline exists for the project and that everyone involved understands what the project is setting out to achieve.

The inputs to this process are the outputs from Starting Up a Project, namely:

- An Initiation Stage Plan.
- The Project Management Team structure.
- The Project Brief.

The output is the Project Initiation Document - or "Pid" as it is often called. The Pid is used as a Baseline for the project and is used at every stage, up to and including closure, to check progress against the original expectations.

It should include clear statements of the project objectives, risks, business case, the full project management team structure, overall project plans and detailed next-stage plans.

The Pid is assembled from products generated in Starting Up a Project and the six sub-processes within "Initiating a Project", and when approved by the project board, it signifies the official start of the project.

The Project Mandate is the starting point or trigger for the project and often contains very little in the way of detail. The Project Brief expands on the Project Mandate sufficiently for the Project Board to be able to decide whether it is worth committing resources to the

production of the Project Initiation Document, which is the most detailed.

Under certain circumstance, it is acceptable to combine some PRINCE2 processes.

For example, in very small projects the Project Brief may not be produced as a separate document - in other words, after the Project Mandate, it may be more appropriate to go straight to the Project Initiation Document. In such cases the two processes of Starting Up and Initiating a Project are effectively combined into one.

4) The Controlling a Stage Process

Following the Project Board's decision to approve a Stage, the Project Management team must be fully focused on the delivery of the products within the stated tolerances of cost, time and quality. The Controlling A Stage Process forms the main part of the Project Managers work and provides the direction for the day-to-day management of the Stage and the overall project.
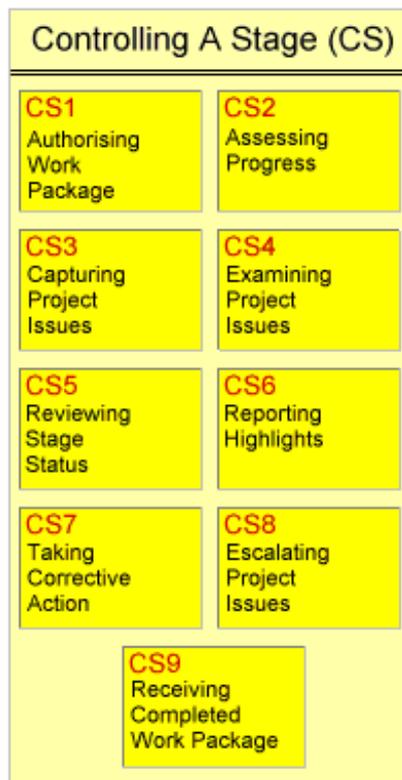
The whole process consists of nine sub-processes which are bound into a cycle of:

- Authorising work to be done.
- Monitoring progress of that work.

- Watching for changes.
- Issuing new work authorisations.
- Reporting.
- Taking any necessary corrective actions.

If changes occur which mean that tolerances are likely to be breached then the "Escalating Project Issues" sub-process should be used to bring the situation to the attention of the Project Board.

5) The Managing Product Delivery Process

The objective of The Managing Product Delivery Process is to ensure that the things that were planned to be produced during a stage, are in fact produced.

Also, progress must be reported to the Project Manager in order that they may carry out the Controlling A Stage process.

The Managing Product Delivery Process is carried out by the manager of the team undertaking the work, or the individual concerned if the job is small.

This process has an authorised work package as its input and signed off products and progress reports as its output. There are three sub-processes as shown below:
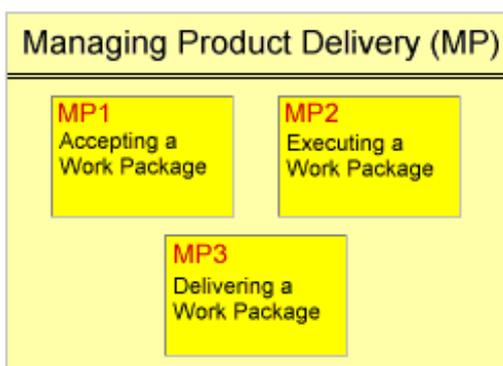
In Lesson 4.4 we will see how the Controls Component aims to achieve a successful project by breaking it into smaller, discrete stages, allowing the project team to focus on specific products.

By controlling the start and finish of each stage, specific attention can be given to whether the stage's products have all been completed within tolerance, whether the remaining products are still required and whether the business case remains valid. This

is a key control process for the Project Board and incorporates all the key aspects of directing a project.

6) The Managing Stage Boundaries Process

The objectives of The Managing Stage Boundaries Process are to:

- Assure the Project Board that all products in the current Stage Plan have been completed as defined.
- Provide the information needed for the Project Board to assess the continuing viability of the project.
- Obtain authorisation for the start of the next stage.
- Record any information or lessons learned that might be helpful in later stages.

The inputs to the process are the various progress and exception reports together with the stage plans. There are six sub-processes leading to the main outputs which are:

- An End-Stage Report.
- A Next-Stage Plan.
- And either a Request for authorisation to proceed to the next stage, or an Exception Plan, for input to the Directing A Project process.

The Managing Product Delivery Process is done by the person who is actually managing the team that is producing the product - normally the Team Manager. It may well be that the Project Manager is doing both jobs but

on a big project there is likely to be a Team Manager or perhaps even several of them.

If an undertaking is to be managed as a project - by definition it must be finite and come to a clearly defined end. Otherwise an operational management approach would probably be more appropriate.

Often the products of a project will need to be formally handed over to operational management - for example a project to build a new car factory will at some stage come to an end and operational management will take over the responsibility of using the plant to produce cars.

7) The Closing a Project Process

The end of a project may arise when all the planned work has been completed and the products finished and signed-off. Alternatively a project may be brought to a premature conclusion because of changes in requirements, lack of resources or unacceptable slippage in cost or time.

In any event the purpose of The Closing A Project process is to execute a controlled and orderly close to the project, regardless of circumstances.

The process is normally performed by the Project Manager and most of the work involves preparing input to the Project Board to obtain their confirmation that the project may close.

There are three sub-processes as shown below and the main inputs are:

- A Notification of Project End.
- A lessons-learned log from the final stage.
- The Project Initiation Document to provide baseline information.
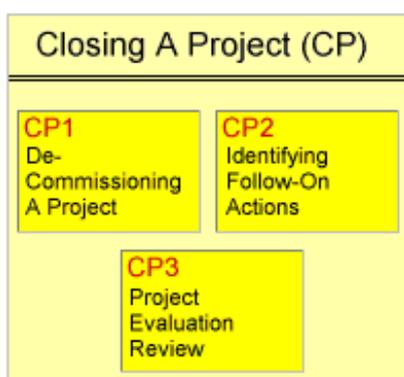
One of the main outputs from the process is an End-Project Report, which should answer the questions:

- Has the Project Initiation Document been fulfilled?
- Is the customer satisfied with the outcome?
- What ongoing maintenance will be needed?
- Are there any recommended follow-up actions?

Two other outputs are a Lesson Learned Report for the whole project and the Project Files that have been accumulated during the course of the project. Both of these can provide valuable information for future projects of a similar nature and avoid the repetition of costly mistakes.

The Project Mandate would not be sufficiently detailed to be used for baselining purposes at the end of a project. It is the Project Initiation Document which is used and against which the project is judged.

A Post-Project Review regime would be included. If such arrangements are not put in place at project closure then they will usually get forgotten about and valuable lessons may never be learned.

Also, if the customer's acceptance is not documented in Closing A Project then it probably never will be recorded which could lead to future legal complications when external suppliers are involved.

8) The Planning Process

The last of the eight main processes to consider is The Planning Process. Planning underpins all of the other processes and even small projects rely on effective planning and control.

Traditional project management methods have started planning from the viewpoint of the activities that are required.

PRINCE2 promotes the idea of starting planning by thinking about the products that have to be produced. In other words:

- What products are needed?
- What quality criteria will be applied?

- In what order should the products be produced?

Once these initial steps have been completed, the traditional approach should be applied to answer the questions such as:

- What activities should be done, when and by whom?
- How much effort will each activity take and how long will it last?
- How much will it cost?
- What risks are involved? and so on.

When we look at the Planning Component in Lesson 4.4, we will see how PRINCE2 advocates planning at 3 levels:

- Project Plans.
- Stage Plans.
- Team Plans.

PRINCE2 identifies seven sub-processes to Planning and The Planning Process has inputs and outputs to each of the processes corresponding to the three planning levels, as shown below:
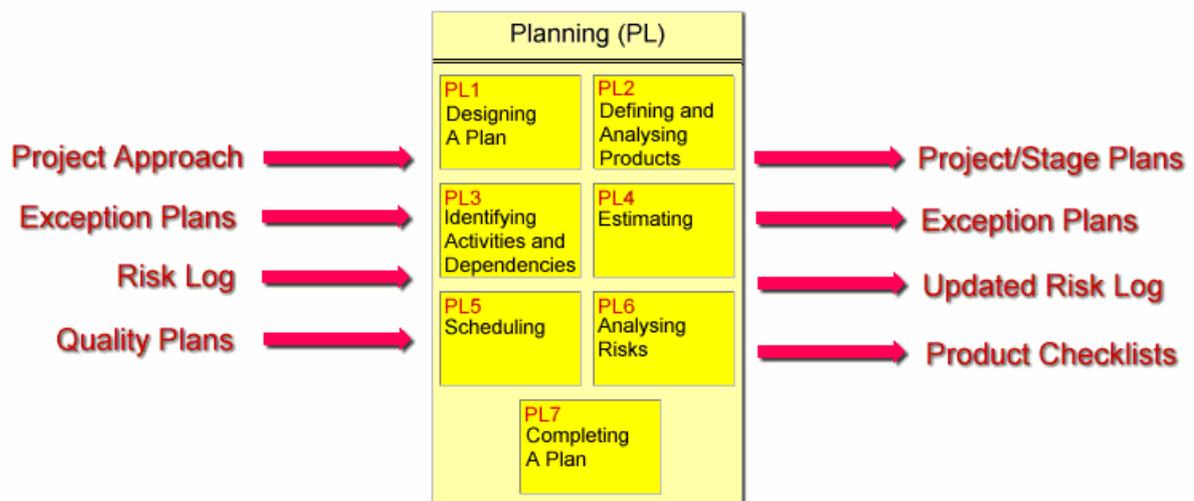
4.4 PRINCE2 Components (1)

We saw in Lesson 1 how PRINCE2 identifies eight essential components for good project management. During the next two lessons we will be examining each of those eight components in some more detail.

Here we will be considering:

- The Business Case.
- The Organisation.
- The Plans.
- The Controls Components.

1) The Business Case

It is a key philosophy of PRINCE2 that any project should be driven and underpinned by a viable Business Case. Unless a satisfactory Business Case exits a project should not be started.

And if, during the course of a project, things happen that render the Business Case for the project invalid – then the project should be aborted.

In PRINCE2 the Business Case is developed at the start of a project and reviewed throughout the life of the project – being reviewed by the project board at each key decision point, such as end-stage assessments.

The Business Case is the most important set of information for a project and must be developed according to any organizational standards that exist. PRINCE2 is not prescriptive as far as the format or contents of the Business Case are concerned, but it does give some guidance on what the main sections should be and the kind of things that should be covered.

The main sections that PRINCE2 suggests should be included in a Business Case are:

Reasons – providing an explanation as to why the project's products are needed.

Benefits – where the benefits that are expected to accrue from the project are identified, described in measurable terms, and quantified – preferably in terms of monetary value.

Initially, benefits may be expressed as something intangible – for example "happier staff". But by analyzing such intangible benefits more carefully they can often be translated into hard monetary values. "Happier staff" will probably result in greater productivity, less absenteeism, and reduced staff turnover – all of which can be quantified in terms of money.

Risks – Projects always involve risk and one of the PRINCE2 components is the management of these risks – we will be looking at this component in the next lesson.

In much the same way that benefits are identified and quantified, so all the likely risks need to be identified and assigned monetary values.

In very simple terms, if the value of the identified risks exceeds the value of the identified benefits then the project is probably not worth doing.

Options - there is always more than one way of achieving an objective and before embarking on a project all the alternatives should be evaluated. In this section of the Business Case all the options that have been considered should be listed and reasons should be given as to why the proposed project approach has been selected.

Cost & Timescale – When the Business Case is first produced detailed information on costs and timescales may not be available – since they are produced in the project plan. However it is necessary to include the best estimates up front – but then to refine them when the Project Plan has been completed.

It may be that the updated information on costs and timescales makes the Business Case for the project look less compelling – in which case consideration must be given to stopping the project before more money is spent.

And finally, an **Investment Appraisal** - There are many techniques for assessing the real worth of projects.

In our Project Risk Management course there is a whole lesson on both the subjective and objective techniques that are commonly encountered.

Since projects usually involve spending money today in order to derive benefits tomorrow,

techniques such as Discounted Cash Flow and Break-Even analysis are particularly relevant.

PRINCE2 makes special reference to just two techniques:

- Sensitivity Analysis.
- GAP (standing for Good-Average-Poor) analysis.

Sensitivity Analysis allows you to determine how dependent the Business Case is on any one particular cost or benefit. Would a 10% rise in the price of oil make the project unviable? If productivity only increased by 8% instead of 12% would the project have been worthwhile?

GAP analysis is sometimes referred to as "Best case, Worst Case, Most Likely" and involves taking three views on any uncertain outcome: Optimistic, Pessimistic and Realistic. Based on the values and likelihoods of each of the three outcomes a weighting can be assigned to any decision for comparison with alternative options.

The Executive is the owner of the project's Business Case. It is the Executive's responsibility to ensure that the project's objectives, costs, and benefits are aligned with the business strategy or programme objectives.

The Project Mandate should contain some basic elements of the Business Case – but at this stage things may be quite sketchy and incomplete.

During the Starting Up a Project process the information from the Project Mandate is used to develop the information required for the Business Case. At this stage the aim is to bring the Business Case up to a basic level, sufficient to allow the "Authorising Initiation" decision to be taken by the Project Board in DP1.

Initiating a Project is where the Business Case is fully developed to form part of the Project Initiation Document. It should now contain all the latest information on costs, timescales and benefits, taken from the Project Plan. This is necessary to support the Project Board's "Authorising a Project" process.

Within the Managing Stage Boundaries process, the Business Case is revised for each End-Stage Report with information from the

stage that is closing and the plans for the next stage. These revisions are a major input to the Project Board in the Authorising a Stage or Exception Plan process.

In Examining Project Issues – each Project Issue is reviewed for any impact that it may have on the Business Case.

And finally, at the end of the project the Business Case drives the creation of the Post-Project Review Plan, which is submitted by the Project Manager as Part of Closing A Project.

2) The Organisation

Of all the factors that determine whether a project succeeds or fails - organisation and staffing are undoubtedly amongst the most important.

If all the project staff are technically competent, well informed, and have the right level of leadership and motivation then the chances of success will be high.

PRINCE2 assumes that projects take place in a Customer-Supplier environment. The customer defines the requirement, pays for the project and uses the eventual products. The supplier provides the required skills and know-how to create the end products for the customer.

This Customer-Supplier approach is then combined with PRINCE2's other primary focus - the need for a sound Business Case for the project.

It is these three interests that form the basis for the management structure that PRINCE2 proposes.

The Project Board

The focal point of the PRINCE2 project management organisational structure is the Project Board.

The Project Board is the overall authority for the project and is responsible for it's initiation, direction, review and eventual closure.

Within the confines of the project, the Project Board is the highest authority, responding only to a corporate strategy body, such as a Board of Directors.

PRINCE2 identifies this top-level body as Corporate or Programme Management and it is from here that the Project Mandate is handed down in order to initiate a project.

The Project Board should represent the three interests discussed earlier:

- The Customer.
- The Supplier.
- The Business interests.

In order to achieve this, three roles are specified:

- The Senior User - representing the customer interest.
- The Senior Supplier - representing the supplier interest.
- The Executive - representing the overall business interest.

The important point here is that these are roles - not job titles or individuals. The roles can be combined or shared and the names can be changed as appropriate to make them more understandable to people within your particular company.

The main concern of PRINCE2 here is that a Project Board exists and that the three interests are properly represented by that board.

In small projects it may be desirable to combine roles - for example the Business Interest and Customer interest might be represented by one person fulfilling two roles - Executive and Senior User.

At the other end of the scale, in very large projects, each role may require a team of people to adequately represent it.

One of the main responsibilities of The Executive is to represent the customer's interests and so it is quite acceptable to combine The Executive and Senior User roles under one person.

The Executive and Senior Supplier may also be combined - although that is far less common.

However, it is not at all advisable to combine the Senior User and Senior Supplier roles. That would lead to a very obvious conflict of interest.

So under any normal circumstances, the minimum number of people on the Project Board would be two.

Each of the three Project Board roles has very clearly defined responsibilities.

The Executive is the key role and is ultimately responsible for the entire project, supported by the other two roles.
The Executive "owns" the business case for the project and has to ensure that the project is delivering value for the time and resources being invested.

It is normally the Executive who chairs the Project Board meetings and resolution of conflicts is very much a part of this role.

Where the project is part of a programme, the Programme Director appoints the Executive and has the option of appointing the other Project Board members or delegating their appointment to the Executive.

The Senior User role represents the interests of all those who will use or be affected by the project and its products.

The responsibility of the Senior User starts with the specification of User needs and commitment of user resources.

As work progresses, it the Senior Users responsibility to monitor what is being produced and ensure that it will meet User needs and that the expected benefits are materialised.

In very many cases the Senior User role will require several individuals to adequately represent all the User interests.

The Senior Supplier role is there to represent the interests of those designing, developing, facilitating, procuring and implementing the project's products.

It is quite common for the Senior Supplier role to be filled by a person or people external to the organisation, although it could be a representative from an internal supplier department or someone responsible for contracts with external suppliers.

We have seen that in the majority of cases, Project Board members will work part-time on the project, and that they will often have many other commitments to attend to.

The Project Manager

Because of this, PRINCE2 defines a fourth mandatory role, that of the Project Manager.

It is the responsibility of the Project Manager to plan and oversee all of the day-to-day work and to ensure that the project is producing the right products, at the right time, to the right standards of quality and within the allotted budget.

Unlike the Project Board roles - the Project Manager role always relates to a single person.

On large projects, the volume of work and demands for specialist knowledge may justify the appointment of Team Managers to support the Project Manager in the management and control of specific technical stages.

The main tasks of the Project Manager include:

- Overall planning for the whole project.
- Motivation and leadership of project staff.
- Liaison with Programme Management over related projects.
- Definition of responsibilities for specialist Team Managers.
- Reporting progress to the project board.

In summary, the Project Manager is there to ensure that a result is achieved which makes it possible to realise the benefits described in the Project Initiation Document.

The Team Managers

The appointment of Team Managers is entirely optional - depending on the nature and demands of the project.

Where they do exist, it is the responsibility of the Team Manager to manage the creation and delivery of the specialist work packages and products under their control, as defined by the Project Manager.

The Team manager will work with the Project Manager to define responsibilities for the team members and provide planning and leadership.

Any suggested changes to the products for which a Team Manager is responsible will be raised informally or as Project Issues and routed up through the Team Manager for a decision on further action.

One of the tasks of a Team Manager is to attend, and usually run, Checkpoint meetings to raise Checkpoint Reports for the Project Manager. It is on the basis of these that the Project Manager then provides regular Highlight Reports to the Project Board.

The job of the Project Manager and the Team Manager is to manage the work, not to actually do it. In most cases the team members will have very specialised knowledge and skills and it would not be possible or desirable for either the Project or Team Manager to carry out such specialised work.

It can happen that the Project or Team Manager does have some particular specialist skill and also fulfils a technical role - but that is an additional role and not part of the management role which is their primary function.

As projects become larger the administrative workload on the Project and Team Managers can easily increase to unrealistic levels.

In such circumstances the Project Board may sanction the establishment of a Project Support function.

Project Support

So PRINCE2 suggests Project Support as an optional function which will only exist where there is a need for it.

Many large organisations may already have a Project Support Office - in which case there will be little need for change as they will already be providing Project Support facilities.

Some of the main tasks that are normally carried out by the Project Support function will include:

- Setting up and maintaining project documentation and the project filing system.
- Up-dating plans and assessing the impact of changes.
- Defining and maintaining project management standards.
- Configuration Management and Change Control.

- Minuting of meetings and compilation of reports.

Project Assurance

The Project Board members do not work full-time on the project, therefore they place a great deal of reliance on the Project Manager.

Although they receive regular reports from the Project Manager, there may always be questions at the back of their minds, 'Are things really going as well as we are being told?' 'Are any problems being hidden from us?' 'Is the solution going to be what we want?' 'Are we suddenly going to find that the project is over-budget or late?' 'Is the Quality System being adhered to?'

All of these questions mean that there is a need in the project organisation for a means of assessing all aspects of the project's performance and products which are independent of the Project Manager. This is the Project Assurance function.

Project Assurance is mandatory, and PRINCE2 separates the Project Assurance function from Project Support.

In cases where a Project Support Office is providing both Project Support and Project Assurance, great care must be taken to draw a clear distinction between the work being carried out for the Project Manager, and the assurance functions which are carried out on behalf of the Project Board.

Project Assurance is the responsibility of each Project Board member and that responsibility cannot be delegated - although some of the work involved may well be.

When such delegation does take place care does need to be taken that no conflicts of interest arise. Project Assurance work should, for example, never be delegated to the Project Manager or the teams.

3) The Plans

Now let's move on to the next PRINCE2 Component - Plans.

PRINCE2 does not prescribe any particular type of plans that must be used on a project. Although the principles of Product-Based Planning are incorporated in the method, and will be covered in Lesson 6 - PRINCE2 Techniques.

There is much misunderstanding about exactly what constitutes a plan. Many people would look at a Gantt Chart for example and consider it to be a complete project plan.

A PRINCE2 plan is much more comprehensive than that and, amongst other things, should state:

- What has to be produced.
- What has to be done to produce it.
- What has to be done to make sure it is produced correctly.
- When it will be produced.
- How progress will be monitored.
- What has to be done to control risks.

There will typically be up to 3 planning levels within PRINCE2:

- Project Plans.
- Stage Plans.
- Team Plans.

a) Project Plans

Project Plans are mandatory within PRINCE2 and, for anything other than very small projects, Stage Plans should also be considered mandatory. Team Plans are optional depending on the needs of the project.

Construction of PRINCE2 plans should normally be on a top-down basis. This will provide a logical and controlled descent into detail and will help to identify any grouping of products and associated activities that might usefully be treated as a separate sub-project.

The Project Plan forms part of the Project Initiation Document and may provide sufficient detail for the early stage plans to be incorporated within it. But it would have to be a very small project indeed to allow detailed planning of all the stages to be included in the initial Project Plan.

The Project Plan identifies key deliverables, resource requirements and the total costs. It also identifies major control points within the project, such as stage boundaries.

Once the Project Initiation Document has been accepted, the initial Project Plan is 'baselined' and shows the original plan on which the project was approved. Subsequent versions of the Project Plan are produced at the end of each stage to reflect:

- Progress already made.
- Any agreed changes in circumstances.
- Any revised forecast of cost or duration for the total project.

The initial and current versions of the Project Plan form part of the information used by the Project Board to monitor how far the project is deviating from its original size and scope.

b) Stage Plans

For each Stage that is identified in the Project Plan, a Stage Plan is required.

We will be exploring the Stages as a part of the Controls Component later in this lesson, but you should note that Stage Plans refer to Management Stages and as such cover discrete periods of time separated by decision points.

Each Stage Plan is finalised near the end of the previous stage. This approach should give more confidence in the plan because:

- The Stage Plan is produced close to the time when the planned events will take place.
- The Stage Plan is for a much shorter duration than the Project Plan.
- The Stage Plan is developed with the benefit of hindsight of the performance of earlier stages.

Stage Plans are similar to the Project Plan in content, but each element will be broken down to the level of detail required to be an adequate basis for day-to-day control by the Project Manager.

c) Team Plans

Team Plans will usually be required for all but the smallest of projects. They are prepared in parallel with the Stage Plan and drop the Stage Plan down to an increased level of detail - in much the same way that Stage Plans reflect an increased level of detail of the Project Plan.

The Team Manager would normally produce Team Plans in consultation with the team members and with the agreement of the Project Manager. This takes place within the Managing Product Delivery Process - which we will be looking at in Lesson 4.5.

Whereas Stage Plans relate to the project's Management Stages - Team Plans reflect the work to be carried out in a particular Work Package.

PRINCE2 does not require the production of Individual Plans for team members - sometimes referred to as Work-To Lists, but these may be drawn up at the Project or Team Managers discretion.

Exception Plans

When it is predicted that a plan will no longer finish within the agreed tolerances, an Exception Plan may be produced to replace that plan.

An Exception Plan is prepared at the same level of detail as the plan it replaces. Most Exception Plans will be created to replace a Stage Plan, but the Project Plan or a Team Plan may also need to be replaced.

An Exception Plan picks up from the current plan's actuals and continues to the end of the original plan.

An Exception Plan has the same format as the plan which it will replace, but the text will cover why the Exception Plan is needed and the impact of the Exception Plan on the overall Project Plan, the Business Case and risks.

This extra information comes from the Exception Report.

Exception Plans require the approval of the Project Manager if they replace a Team Plan, the Project Board if they replace a Stage Plan or Corporate Management if they replace the Project Plan.

4) The Controls

The main mission of any project management method is to enable management at all levels to exercise control over what has been planned and approved. Control is all about

decision-making, and is the central role of project management.

The purpose of control is to ensure that the project:

- Is producing the required products that meet the defined Acceptance Criteria.
- Is being carried out to schedule and budget.
- Remains viable against its Business Case.

Controls ensure that, for each level of the Project Management Team, the level above can:

- Monitor progress.
- Compare achievement with plan.
- Review plans and options against future scenarios.
- Detect problems, initiate corrective action and authorise further work.

Controls must also cover capturing information on changes from outside the project and taking the necessary actions.

PRINCE2 applies the concept of 'management by exception' as far as the Project Board is concerned. That is, having approved a Stage Plan, the Project Board is kept informed by reports during the stage. There is no need for 'progress meetings' during the stage. The Project Board knows that the Project Manager will inform them immediately if any exception situation is forecast.

The major controls for the Project Board are:

- Project Initiation - Should the project be undertaken?
- Highlight Reports - Regular progress reports during a stage. These are prepared by the Project Manager using information derived from CheckPoint Reports, which are produced at Team Level.
- Exception Reports - Early warning of any forecast deviation beyond tolerance levels.
- Exception Assessment - The Project Board jointly consider what action to take in response to a forecast deviation.
- End Stage Assessment - Has the stage been successful? Is the project still on course? Is the Business Case still viable? Are the risks still under

control? Should the next stage be undertaken?
- Project Closure - Has the project delivered everything expected? Are any follow-on actions necessary? What lessons have been learned?
- Tolerance.

Tolerance

In most cases the Project Board will set boundaries within which variances can occur without need for the Project Manager to refer back to them. The value of these boundaries is known as the Tolerance, which is another very important Project Board Control.

No project ever goes 100% according to plan, and minor departures from plan will frequently occur. So in order to avoid being troubled by every minor deviation, the Project Board will assign Tolerance levels and delegate these to the Project Manager.

As work progresses on a project stage, the definition of a significant departure - in other words, one that the Project Manager must raise with the Project Board - is that the Tolerance has been or is likely to be exceeded.

Whilst Tolerance is a major Project Board Control, and is mainly exercised at the Management Stage level - the concept is also appropriate at Project and Team levels. And so three levels of Tolerance can be identified:

- Project Tolerance is set by Corporate or Programme Management.
- Stage Tolerance is agreed by the Project Board at the beginning of a management stage and is delegated to the Project Manager.
- Product Tolerance will usually be recorded in the Work Package that is agreed between the Project Manager and the Team Manager with responsibility for the product.

Stages

As a means of effecting adequate control, PRINCE2 mandates the use of stages - partitions within the project with decision points at their conclusion and, sometimes, during their life.

PRINCE2 differentiates between Management Stages and Technical Stages.

Management Stages are sequential periods of time - they cannot overlap or run in parallel. Each Management Stage is separated by a Project Board decision as to whether to continue the project and commit resources to the next Management Stage.

Technical Stages comprise sets of technical activities leading towards a particular product. They will often overlap and run in parallel and they are normally planned and managed by the Team Managers, under the direction of the Project Manager.

Some thought must be given to the handling of the interface between Management Stages. In most cases it would not be sensible to stop work on the project while the Project Board meet to assess the End-Stage Report, updated Plans, updated Business Case and the Next Stage Plans.

To avoid such unnecessary delays, Technical Stages will often overlap Management Stage boundaries and some degree of planning for the next Management Stage must be included in the current Management Stage.

Even the smallest PRINCE2 project has at least 2 Management Stages. The first one being the Initiation Stage - necessary to decide if the project is worthwhile or not, and the second one may then be the whole of the rest of the project.

4.5 Components (2)

In this lesson we will be looking in some detail at the remaining four PRINCE2 components, namely:

- The Management of Risk.
- Quality in a Project Environment.
- Configuration Management.
- Change Control.

1) The Management of Risk

Risk is an inherent and unavoidable factor in all projects. By definition projects are unique undertakings and so are subject to a higher degree of unpredictability than routine or operational work.

Projects also take time and no matter how well they are managed, there will always be the risk that during its lifetime events in the world outside will change and impact on the project or the Business Case on which it is founded.

PRINCE2 itself is an attempt to reduce the avoidable and unnecessary risks within a project - but until somebody comes up with a 100% accurate way of predicting the future projects will always involve risk.

PRINCE2 defines risk as:

"Uncertainty of outcome"

The task of risk management is to ensure that a project's exposure to risk is kept within acceptable levels, in an efficient and cost-effective manner.

Effective risk management involves an understanding of three main principles:

a) Risk Tolerance – sometimes called risk appetite. Depending on the nature of the project and the attitude of the stakeholders involved, different levels of risk may be considered acceptable.

A military commander may accept that, in order to achieve a particular objective, some lives may be lost. It is unlikely that that would be considered an acceptable risk by an IT manager responsible for implementing a new payroll system.

The risk tolerance of all the project stakeholders must be fully understood in order to achieve an optimum balance between the threat of a risk occurring and the costs of mitigating against that risk.

b) Risk Responsibilities – according to PRINCE2 the Project Manager is responsible for ensuring that risks are identified, recorded and regularly reviewed.

The Project Board has four specific responsibilities:

- Notifying the project manager of any external risks.
- Making decisions based on the Project Manager's recommendations with respect to risks.
- Striking a balance between levels of risk and expected benefits.
- Notifying corporate or programme management about risks that may affect the project's ability meet it's objectives.

c) Risk Ownership - every risk that has been identified in the Risk Log – which we will be looking at in more detail shortly – must be assigned an owner.

Overall ownership of the Risk Log will normally lie with the Project Board's Executive role – but ownership of each specific risk within it should be assigned to the person best positioned to keep an eye on it.

The Executive must ensure that the individuals that own each risk are clearly identified, documented and agreed so that they understand their ultimate accountability with regard to the management of risk.

The Risk Management Process

In order to contain risks during a project, they have to be managed in a systematic and disciplined manner. The Management of Risk can be broken down into two distinct phases.

- Risk Analysis.
- Risk Management.

a) Risk Analysis

Risk Analysis is all about, what? what if? and what now?. It comprises four principle activities:

i) Risk Identification - where the potential risks – and indeed opportunities, which can be managed as part of the same process – are identified and documented.

Once identified, all risks are entered to the Risk Log, which is a summary document of all the risks, their assessment, owners and status.

The Risk Log is initially created as part of the Starting Up process and is updated and maintained as the project progresses. It is essentially a control tool for the Project Manager and provides a quick point of reference for all the risks that are being faced.

ii) Risk Evaluation – there are two factors that determine how important a risk is. The chances of it happening and the cost or consequences if it does.

These are often referred to as the *likelihood* and *impact* of the risk and, as a means of assessing the relative values of different risk, the two factors can be multiplied together to give a single numeric value.

So – for example if there is a 10% chance of a risk occurring and the cost if it does occur is £1000 – the risk would be valued at £100.

If a different risk only had a 1% chance of cropping up – but would cost £10,000 if it did – the value of that risk would also be £100, and so both risks would be considered to be of equal importance.

Not all risks can be measured in simple numeric terms so some framework to cater for subjective assessments will be needed.

Also, as part of the risk evaluation exercise some thought should be given to the timing, or "proximity", of a perceived risk so that attention can be focused on the more immediate ones.

iii) Response Identification - the actions that can be taken in response to identified risks break down into five main categories:

- Prevention - stopping the risk occurring or preventing it from having any impact on the project or business.

- Reduction - reducing the likelihood of the risk developing or limiting the impact to acceptable levels.
- Transference - passing the impact of the risk to a third party often via an insurance policy.
- Contingency - where actions are planned to come into force as and when the risk occurs.
- Acceptance - where the Project Board decides to go ahead, accepting the possibility that the risk may occur.

iv) Response Selection - the final risk analysis activity identified by PRINCE2 is to select which of the identified responses to apply. This will normally involve taking account of and balancing a number of factors such as cost, likelihood, impact and risk tolerance.

b) Risk Management

Risk Management consists of four major activities:

i) Planning - for any countermeasure actions identified during Risk Evaluation, and developing a detailed plan of action for inclusion in the Stage Plan.

ii) Resourcing - identifying and assigning resources to be used in avoidance or mitigation actions.

iii) Monitoring - checking that planned actions are having the desired effect and watching for early signs that a risk is developing.

iv) Controlling - which is taking action to ensure that the events of the plan really happen.

Section 17.5 of the PRINCE2 manual provides a description of how each of the processes identified within the PRINCE2 process model is relevant to the management of risk.

2) Quality in a Project Environment

PRINCE2 uses a definition of quality that is taken from the ISO 8402 standard, namely:

"The totality of characteristics of an entity which bear on its ability to satisfy stated and implied needs".

A slightly less cryptic definition, which we prefer is:

"Fitness for Purpose"

Within a project environment the main aim of Quality Management is to ensure that the products that are produced are fit for their intended purpose and satisfy the needs and expectations of the Customer.

Such quality expectations must be reflected throughout the PRINCE2 project environment. Ideally they will be stated right at the start in the Project Mandate, included in the Project Brief and then expanded in the Project Initiation Document. From there on Quality is a component that is prominent throughout the lifecycle of the whole project.

There are four inter-related elements that make up Quality Management:

- A Quality System.
- Quality Assurance.
- Quality Planning.
- Quality Control.

a) A Quality Management System - PRINCE2 assumes that projects will be carried out within an environment that is covered by a formal and published Quality Management System - such as ISO9001.

Such systems lay down standards for the documentation of processes and procedures to ensure the delivery of a consistent level of quality.

For a quality system to conform to ISO9001 it must satisfy each of its twenty main clauses and their sub-clauses. PRINCE2 was not designed to be a Quality Management System in its own right, but it does make a significant contribution such a system.

The main tangible evidence of a company's Quality Management System will be the Quality Manual which - according to ISO9001 - should start off with a clear statement of the company's Quality Policy as defined by the Senior Management.

The Quality Manual should then go on to document the Organisation Structure and all of the processes and procedures which go on within the organisation and which have a bearing on the ability to deliver quality.

ISO9001 certification proves that a company is operating a quality management system that conforms to the standard. It says nothing at all about the quality of the products that the company is producing. Be careful not to confuse the ISO9001 standard with technical or engineering standards that may apply to the technical specification of products.

ISO9001 is intended to ensure consistency - if the company policy is to produce faulty goods - ISO9001 will ensure that faulty goods are produced consistently.

b) The Quality Assurance function - is responsible for setting up and maintaining the Quality Management System.

Quality Assurance ensures everything which goes on within an organisation is in line with laid down procedures and that the end products satisfy the relevant quality standards.

In many large organisations there will be a corporate Quality Assurance function that audits all the other departments to ensure that they are adhering to the Quality Management System.

This gives Quality Assurance a degree of independence that is essential to objectivity.

One of the roles of the corporate Quality Assurance function is to ensure that projects are being run in accordance with the method and procedures laid down in the Quality System.

If a corporate Quality Assurance function does not exist then Quality Assurance for projects will normally be included in the role of Project Assurance.

On the other hand, Quality Planning and Quality Control for projects are very much the responsibility of project management.

c) Quality Planning - establishes the objectives and requirements for quality and lays out the overall approach, Project Quality Plan and defines the stage quality activities that are needed to ensure that quality is achieved.

It is important that the customer's quality expectations are fully understood and documented prior to the project commencing. In the Project Initiation Document, the quality

approach for the whole project is defined in the Project Quality Plan.

d) Quality Control - is the means of ensuring that products meet the quality criteria specified for them. Quality Control is about examining products to determine that they meet requirements and so normally takes place after some work has been done.

The Quality Review Technique, which we will be looking at in Lesson 6, is one of the main techniques used as part of the quality control procedures.

Quality Assurance is all about prevention rather than cure. Whereas Quality Control is more to do with inspection of finished goods to ensure they meet specification.

3) Configuration Management

A configuration is a logically related set of products that need to be managed as a composite set. In project management terms, the configuration to be managed is the sum total of all the equipment, documentation, instructions and information which together represent the products or deliverables of the project.

A good example of configuration management occurs in the motor industry. When you go into your local Ford main dealer to get a replacement light cluster for your 1973 Ford Escort - it is Configuration Management which, in conjunction with the information about the car's model number and date of manufacture, enables the right part to be supplied.

Configuration Management provides techniques and procedures to:

- Identify the individual items that need to be managed - these are known as configuration items.
- Record and Monitor the current status of each configuration item as its development progresses.
- File all of the documentation that is produced during a product's lifecycle.
- Distribute, record and control the circulation of all the copies of project documentation.
- Manage Project Issues raised during the project.
- Manage changes to all the configuration items.

In PRINCE2, Configuration Management is not an optional item - it is essential for successful project management. The method mandates that all the products of a PRINCE2 project are controlled using an appropriate Configuration Management Method which, via some kind of coding or referencing system, should provide a means of creating, amending and deleting configuration items, identifying their owners, and auditing the validity of configuration information.

Configuration Management consists of five basic functions:

- **Planning** - deciding the level at which products need to be controlled and deciding how that control should be exercised.
- **Identification** - where all the sub-products making up the final product are specified and identified.
- **Control** - whereby configuration items are frozen once their specification has been agreed. Changes can then only be made with the agreement of the appropriate and named authorities.
- **Status Accounting** - the recording and reporting of all current and historical data to do with a product.
- **Verification** - a series of reviews and audits to confirm that the information in the configuration management system coincides with the status of the actual products themselves.

Configuration Management is concerned with controlling all of the products of the project.

The last of the eight PRINCE2 Components, Change Control is very closely linked with Configuration Management.

4) Change Control

Change is an inevitable fact of life in projects, but changes to specification or scope can potentially ruin a project unless they are carefully controlled. The control of changes implies an assessment of their impact, their importance, their cost and a decision as to whether they should be authorised.

PRINCE2 treats all potential changes to the project's products as Project Issues and under the Techniques section puts forward an approach to Change Control that we will be looking at in Lesson 4.6.

One of the considerations at Project Initiation is deciding who can authorise changes, at what level and how changes will be funded.

In a project where few changes are envisaged, the Project Board may nominate itself as the only change authority.

But many projects take place in a dynamic environment, with many requests for change of varying significance and the Project Board would not want to be troubled with every minor change which crops up. In these circumstances the Project Board may delegate the consideration of changes to a group known as a Change Authority who will operate with a budget for changes and within previously agreed limits of tolerance.

Changes, and the Project issues that they generate, should not be considered in isolation.

Each potential change must be viewed against the benefits it offers and it's impact on the Business Case.

Each Project issue must also be considered against the Risk Log - Would the change impact an existing risk or would it create a new risk?

Finally, where a project exists as part of a programme, then the impact of the change on the programme as a whole needs to be considered. There may also be effects on other projects that are not necessarily part of the programme.

Any decision about the project, made by the Project Board, can only be changed by the Project Board - unless they have delegated this authority to a Change Authority. The appropriate authority for signing off changes to a product will be identified in the configuration management information.

4.6 PRINCE2 Techniques

In this lesson we will be examining the third and final major section of the PRINCE2 Manual, PRINCE2 Techniques.

There are three Techniques that PRINCE2 puts forward:

- Product-Based Planning.
- Change Control.
- Quality Reviews.

You may have spotted a slight contradiction here. We said in the course introduction that PRINCE2 is all about the "What?" and the "Why?" of project management and says very little about the "How?" part.

Techniques are very much "the How" of doing a job and so this section is an exception to that general rule.

It is nevertheless still very true that PRINCE2 does not set out to give a comprehensive set of techniques for managing projects. There are very many techniques that can be used - some of which may be quite specific to the industry sector or type of project being considered.

All that PRINCE2 does is to recommend three basic techniques that are particularly relevant to the way PRINCE2 projects should be run.

1) Product-Based Planning

The first of these techniques, Product-Based Planning is now widely accepted and used extensively on all kinds of project - whether PRINCE2 is being applied or not.

The Project Management Fundamentals course, a sister course to this one within the Key Skills PM Portfolio, has a complete lesson on the subject of Product Based Planning which gives much more in-depth coverage than is required here.

According to the traditional way of planning projects, the starting point was to decide on all the activities that were needed to complete the project.

PRINCE2, quite sensibly, says that a better starting point is to determine and fully understand all the products, or deliverables as they are often referred to, which the project is to create. Having done that, it will be much easier to identify and plan the activities necessary to create them.

The Product-Based Planning technique is closely allied to the Plans Component and the Planning Process and it consists of three main steps:

- The production of a Product Breakdown Structure.
- The writing of Product Descriptions.
- The production of Product Flow Diagrams.

A product, in PRINCE2 terms is anything that is produced by, or on the way through a project. So in referring to products we don't just mean the physical and tangible entities that make up the final deliverable. Also included are all the items of paperwork, reports and control mechanisms that have to be produced during the course of a projects lifetime to ensure that the project is managed correctly.

Because of this, PRINCE2 divides products into two categories:

- Management Products.
- Specialist Products.

The Management Products are almost exclusively items of paperwork that are necessary to ensure the project remains in control and that it is producing things which satisfy the expectations of the customer.

It is the Specialist Products that are the subject of the plan. The project exists in order to create Specialist Products - Management Products are effectively by-products of that process.

It is very rare in a project for work to begin immediately on the final end-product. More often interim products have to be produced on which the final product will be based.

Products are therefore defined as anything that is produced by, or on the way through, the project, which can be identified, described and is tangible and measurable.

a) The Product Breakdown Structure

The Product Breakdown Structure is very similar in concept to the Work Breakdown Structure that you may already be familiar with.

The idea is to take a top-down view of all the products which the project is going to generate - starting off at the top with the finished deliverable which is the object of the project - and then to break each product down into its constituent components in a hierarchical structure.

So in a PRINCE2 project, there would normally be two sub-products to the final deliverable, namely:

- Management Products.
- Specialist Products.

The Management Products branch of the structure may look something like this - with the various products - which are mainly documents - organised into their respective positions within the project's lifecycle.

The Management branch will tend to look very similar from project to project - since these are the products that PRINCE2 suggests for the management and control of all projects, regardless of size or type.

The Specialist Products branch, however, will be unique to each and every project. The products represented here are the object of the project's existence.

Let's suppose our project is the building of the Channel Tunnel and think about how this project might be structured in terms of its Specialist Products. At the highest level we would have the major product, which is a cross-channel rail-link.

In order to achieve that, we would need three major sub-products:

- The Tunnel itself.
- Passenger Terminal facilities.
- The actual railway system that would operate through the tunnel between the two terminals.
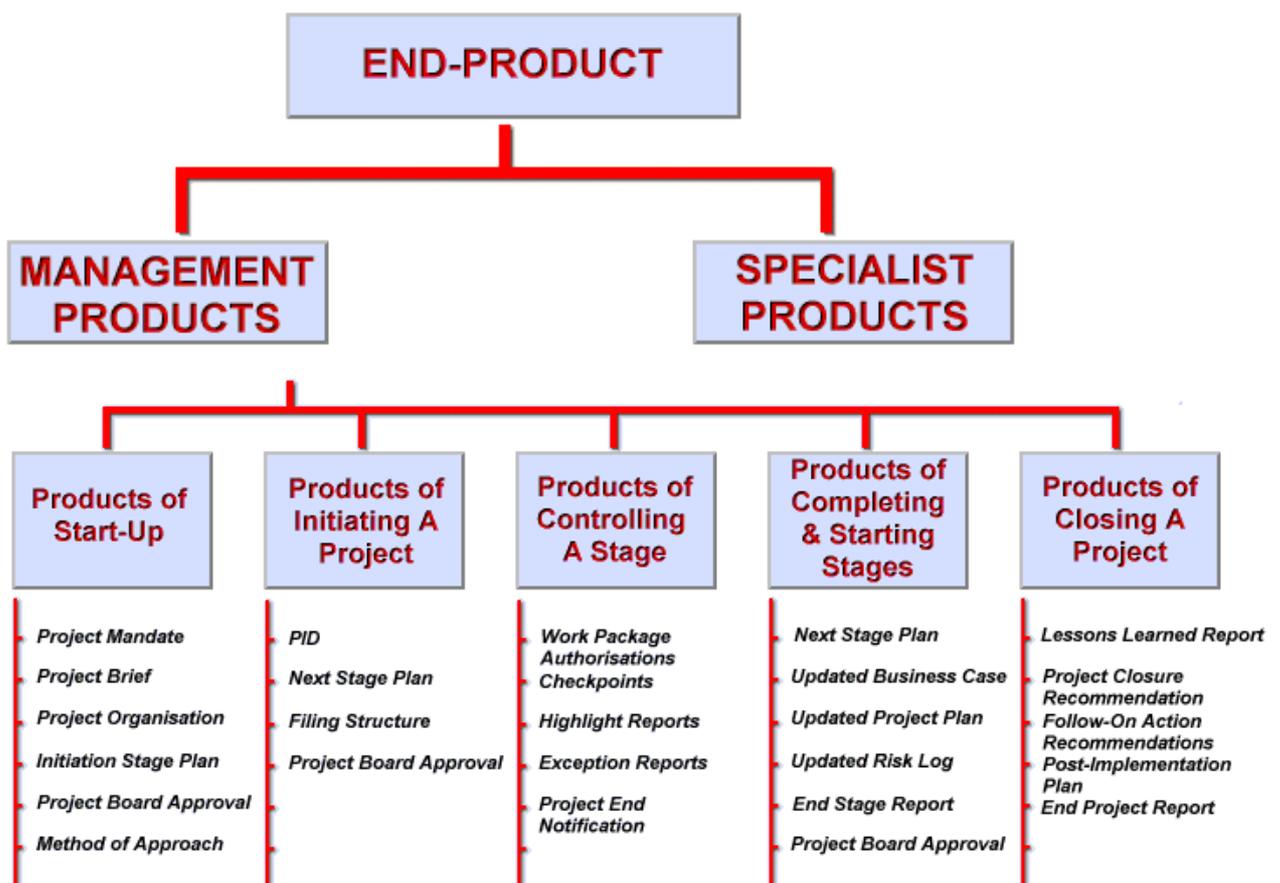
Each of these sub-products would then have its own sub-products - the Tunnel, for example, would be made up of an excavated hole in the ground, the tunnel lining and the services such as lighting and ventilation which would also be needed.

And so on for the other two major sub-products. The breaking down of major products into sub-products would go on until the products were small enough for the necessary degree of control to be exercised in the given circumstances. Deciding at what level to stop this process is very much down to experience and judgement.

product is, how it should look and how it's acceptability will be judged.

This is where Product Descriptions come in. As soon as the need for a Product has been identified on the Product Breakdown Structure, a Product Description should be written to ensure that it is fully understood and to provide pointers as to how the product will be presented and what the quality expectations are.

A word of caution is needed at this point.
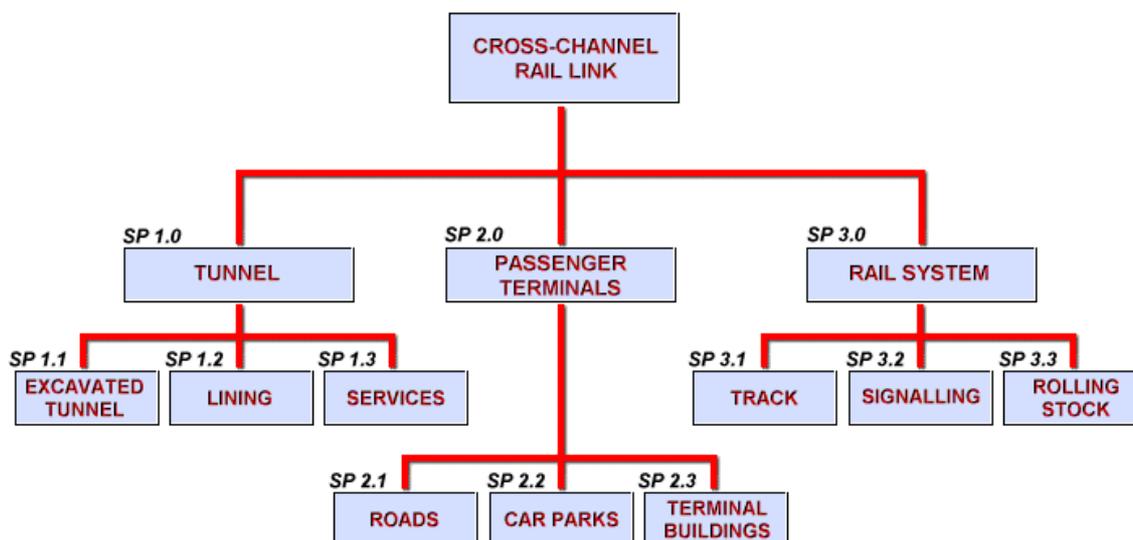
Once a Product Breakdown Structure has been produced which adequately represents what is to be created, a numbering system will often be employed so that each product is uniquely identified within the structure. The classic decimal style, like the one shown above, is very commonly used and these numbers are a very important input to the Configuration Management component.

b) Product Descriptions

One of the main advantages of the Product-Based approach to planning is that once a product has been identified and defined, responsibility for its creation can be assigned to a particular individual. This concept is often referred to as Product Ownership.

If somebody is to be asked to assume responsibility for, or ownership of, a product it is only fair that they should be given a very clear and unambiguous definition of what the

Taken to extremes, the writing of Product Descriptions can become a very burdensome and bureaucratic overhead. Attention should be concentrated on products that are new, particularly important or those that have caused problems in the past.

The Project Manager needs to be intelligent in deciding how much effort to devote to producing Product Descriptions and it makes sense to concentrate initially on the higher-level products and then write the necessary lower level descriptions as they become required.

Also, Product Descriptions should not be seen as a substitute for detailed technical specifications. It may be necessary to cross-reference items like technical drawings and detailed design specifications, but the Product Description should be seen as a higher level document which exists to help and support the planning and production process - it is not an end in itself.

The Project Manager would have responsibility for ensuring that adequate Product Descriptions are produced. However, it is wise to involve people from the areas with expertise in the product in question.

It is especially important to involve users or customers in writing Product Descriptions and defining quality expectations.

All too often customers can ask for one thing - believing their request to be quite straightforward. But misinterpretation means that they end up with something quite different from what they expected.

By getting them to assist and then "sign-off" the Product Description, you could save yourself a lot of expense and embarrassment by producing a product that nobody wants.

PRINCE2 recommends the main headings that should be included in a Product Description as:

- **Purpose** - Why do we need this product?
- **Composition** - What are the components that will make up the product?
- **Derivation** - From what is the product going to be produced or from where obtained?
- **Format** - How will the product be presented and what will it actually look like?
- **Quality Criteria** - What criteria must the product meet for it to be judged "fit for purpose?"
- **Quality Method** - How will the quality assessment be made?

Appendix A in the PRINCE2 Manual uses a similar format to describe each of the main PRINCE2 products.

In addition to the six main headings already described you will notice a few other key items of information that need to be included, for example:

- The **Product Reference** or **Identification Number** - as we discussed earlier.
- The **Product Manager** - whose job it is to ensure delivery of the product on time and to specification.
- **Document and Version** numbering information that will form part of any change control or configuration management system.

c) The Product Flow Diagram

Once a complete understanding of the required products of a project has been achieved, attention needs to focus on the sequence in which those products need to be created.

Product Flow Diagrams are the technique used to show the order in which products must be created and, based on this, it then becomes relatively straightforward to produce a schedule of all the activities that are required for the project.

A Product Flow Diagram uses very few symbols - simple rectangles - to represent each product and arrows joining the rectangles and showing their sequence. Where a product already exists, or is sourced external to the project then it can be shown using a circle or an ellipse.

Time flows in only one direction, either from top to bottom or left to right. In this course we will always show time flowing from top to bottom when we look at Product Flow Diagrams.

The starting point for the Product Flow Diagram will be the product or products that are available right at the start of the project and the end will be the final deliverable of the whole project.

Referring back to the Channel Tunnel example, we can see from the Product Breakdown Structure for the Specialist Products (page 36) all the major products that have been identified.

Before work can start on any of these products, we would in fact need a Management Product, which would be an Approval to Proceed.

Once approval for the project has been granted work can commence on excavating the hole for the tunnel.

Since there are no dependency issues, work can also start immediately on building the new road system around the terminals and the rolling stock that will eventually operate in the finished tunnel.

Having produced an excavated hole, the next required product is the lined tunnel, followed by a lined tunnel complete with all the required services. And so for each of the other branches until eventually the required end-product is arrived at.

Each of the arrows on a Product Flow Diagram represents a transformation of one product into another and that transformation is achieved via a series of activities.

In order to transform an excavated hole into a lined tunnel requires a major activity - "Build Tunnel Lining". Then to transform this into the tunnel complete with services might require "Install Electricity", Install Lighting", "Install Ventilation" and so on.
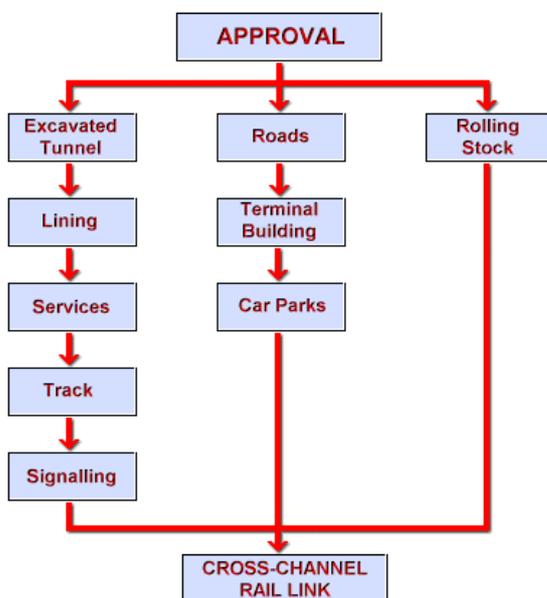
Hence it is easy to see how Product Flow Diagrams form the link between Product Based Planning and Activity Based Planning.

2) Change Control

It is very likely that your organisation will already have in place established Change Control procedures and forms. Provided these satisfy the basic requirements of PRINCE2 then there is no problem in using them to control changes which occur during a project's lifecycle.

Under PRINCE2, all changes are treated as types of Project Issue and are handled through the same change control approach.

A Project Issue can be a request to change the specification of requirements or a suggestion to improve a product. This type of Project Issue is known as a Request for Change.

A different type of Project Issue would be a record of an actual or expected failure to meet a specified requirement - known as an Off-Specification.

Any questions that arise on any project topic can also be raised as a Project Issue.

Whatever it's type every Project Issue is sent to the Project Manager and recorded in an Issue Log, where a unique number is allocated and the author, date and type of issue are recorded. The author should also include a priority rating for the issue.

Any Project Issues which are questions, or which are based on misunderstandings should be answered directly and a reply sent to the author, filed and the Issue Log updated.

The remaining Issues should be subjected to an Impact Analysis to determine:

- What would have to change?
- What effort will be involved?
- What effect will the change have on the business case?
- What risks arise because of the proposed change?

The Project Manager decides which Requests For Change, if any, should be implemented within the current Stage Plan - but in every case there should be discussion with the Senior User and Senior Supplier. Without the approval of the Project Board, the Project Manager should not authorise any work that changes a product that has already been approved by the board.

In the case of Off-Specifications the Project Manager will try to resolve the problem within the predefined tolerance limits. If this is not possible then exception procedures must be followed and the decision of the Project Board must be sought. If the Project Board decides to accept an Off-Specification without any correction then this is known as a "Concession".

Where the project is part of a programme neither the Project Manager nor the Project Board may be in a position to judge the impact

of changes within their project on other projects within the programme.

There are two possible strategies for overcoming this problem. The first is to screen all changes at Programme level to assess where the decision about a change needs to be made.

Alternatively, a representative from Programme management can be made part of the project's Change Control authorisation loop.

3) Quality Reviews

A Quality Review is where a team of qualified people get together with the express purpose of checking a completed product for errors.

A Quality Review can be invoked at any point within a project, since any product can be the subject of a review. The Quality Review technique has close ties with the "Planning", "Managing Product Delivery" and "Controlling a Stage" processes.

Among the main benefits which Quality Reviews offer are a structured and organised approach to the examination of subjective quality criteria and the early identification of defects.

The objectives of a Quality Review are:

- To ensure that a product meets business, user and specialist requirements.
- To assess conformity of a product against pre-defined criteria.
- To provide a platform for product improvement.
- To involve all those with a vested interest in the product and to promote product ownership.
- To provide a mechanism for monitoring and control of progress.

There are three basic steps in the Quality Review procedure:

Preparation - Confirm where and when the meeting will take place and who will attend, send out a copy of the product for review, if that is possible, assess the product against the quality criteria and produce a question list to send to the producer.

The Review Meeting - consisting of discussion and clarification of any major errors, agreement on appropriate follow-up actions, agreement on Quality Review outcome and sign-off of product if appropriate and documentation of actions and responsibilities.

The results of a Quality Review will normally be one of three:

- The product will be error free and can be signed off at the meeting.
- The product will contain some small errors and once these are corrected sign-off can be done without further review.
- The errors will be so serious that following correction the product will have to be reviewed again.

Follow-Up - involving Notifying the Team Manager of the Quality Review results, planning any remedial work required and signing-off the product after successful remedial work.

There is actually a fourth step, which is **Planning the Quality Review**, where the products to be reviewed and the reviewers are identified and timescales for the review are allocated. This step is carried out as part of the Planning process.

The people who will normally be involved the Quality Review process are:

- The Producer - who is usually the creator or author of the product being reviewed.
- The Review Chair - who ensures that the meeting is properly organised, sets the agenda, controls the meeting and provides final sign-off of the product. Often the Producers line manager, the Project Manager or some other competent person with authority will assume this role.
- The Reviewers - who must be competent to assess the product from their particular specialist viewpoint.
- The Scribe - who will take notes of the agreed actions arising from the meeting.
- In addition, representatives from Project Support, Project Assurance and Quality Assurance may also take part to provide administrative support and to ensure compliance with project and corporate quality standards.

The Quality Review process exists to find errors in products that have been produced by people and as such it holds enormous potential for the generation of conflict at the expense of objectivity.

The PRINCE2 Manual includes a very good section on Hints and Tips to overcome some of the practical problems in running Quality Review meetings, and the text of these is duplicated on the course CD-ROM.

It is important to understand that Quality Review meetings are set up to identify errors - not correct them. The people in the review meeting may not be the best qualified to determine solutions to any errors found so any solutions suggested during the review meeting should be noted for later consideration by the appropriate specialist.

Quality Review meetings must take place in an atmosphere that is free of both ego and fear. The purpose of the process is to assess the product <u>not the producer</u> and if the producer thinks otherwise they may well become overly defensive and objectivity will be lost.

Glossary

A

Acceptance Criteria

A prioritised list of criteria that the final product(s) must meet before the Customer will accept them: a measurable definition of what must be done for the final product to be acceptable to the customer. They should be defined as part of the Project Brief and agreed between Customer and Supplier no later than the Project Initiation Stage. They should be in the Project Initiation Document.

Activity Network

A flow diagram showing the activities of a plan and their interdependencies. The network shows each activity's duration, earliest start and finish times, latest start and finish times and float. See also **critical path.**

B

Baseline

A snapshot; a position or situation that is recorded. Although the position may be updated later, the baseline remains unchanged and available as a reminder of the original state and as a comparison against the current position. Products that have passed their quality checks and are approved are baseline products. Anything 'baselined' should be under version control in configuration management and 'frozen', i.e. no changes to that version are allowed.

Benefits

The positive outcomes, quantified or unquantified, that a project is being undertaken to deliver and that justify the investment.

Benefits Realisation

The practice of ensuring that projects produce the projected benefits claimed in the Business Case.

Business Case

Information that describes the justification for setting up and continuing a PRINCE2 project. It provides the reasons (and answers the question 'Why?') for the project. It is updated at key points throughout the project.

C

Change Authority

A group to which the Project Board may delegate responsibility for the consideration of Requests For Change. The Change Authority is given a budget and can approve changes within that budget.

Change Budget

The money allocated to the Change Authority to be spent on authorised Requests For Change.

Change Control

The procedure to ensure that the processing of all Project Issues is controlled, including the submission, analysis and decision-making.

Checkpoint Meeting

A team level, time-driven review of progress.

Checkpoint Report

A progress report of the information gathered at a Checkpoint meeting, which is given by a team to the project manager, and provides reporting data as defined in the Work Package.

Communication Plan

Part of the Project Initiation Document describing how the project's stakeholders and interested parties will be kept informed during the project.

Concession

An Off-Specification that is accepted by the Project Board without corrective action.

Configuration Audit

A comparison of the latest version number and status of all products shown in the configuration library records against the information held by the product authors.

Configuration Management

A discipline, normally supported by software tools, that gives management precise control over its assets (e.g. the products of a project), covering planning, identification, control, status accounting and verification of the products.

Configuration Status Account

A report on the status of products. The required products can be specified by identifier or the part of the project in which they were developed.

Contingency Budget

The amount of money required to implement a contingency plan. If the Project Board approves a contingency plan, it would normally set aside a contingency budget, which would only be called upon if the contingency plan had to be implemented.

Contingency Plan

A plan that provides an outline of decisions and measures to be taken if defined circumstances, outside the control of a PRINCE2 project, should occur.

Critical Path

This is the line connecting the start of a planning network with the final activity in that network through those activities with the smallest float. Often this is a line through the network connecting those activities with a zero float, i.e. those activities where any delay will delay the time of the entire network.

Corporate Body

Used to describe any company, government department, corporation or charitable body that is involved in the project. It can be a customer for the end results, supplier of specialist skills or deliverables, assurance or auditing body. The word is used to avoid confusion particularly between the public and private sectors.

Customer

The person or group; who commissioned the work and will benefit from the end results.

D

Deliverable

An item that the project has to create as part of the requirements. It may be part of the final outcome or an intermediate element on which one or more subsequent deliverables are dependent. According to the type of project, another name for a deliverable is 'product'.

E

End Project Report

A report given by the Project Manager to the Project Board, that confirms the hand-over of all deliverables and provides an updated Business Case and an assessment of how well the project has done against its Project Initiation Document.

End Stage Assessment

The review by the Project Board and Project manager of the End Stage Report to decide whether to approve the next Stage Plan (unless the last stage has now been completed). According to the size and criticality of the project, the review may be formal or informal. The approval to proceed should be documented as an important management product.

End Stage Report

A report given by the Project Manager to the Project Board at the end of each management stage of the project. This provides information about the project performance during the stage and the project status at stage end.

Exception

A situation where it can be forecast that there will be a deviation beyond the tolerance levels agreed between Project Manager and Project Board (or between Project Board and corporate or programme management, or between a Team Manager and the Project Manager).

Exception Assessment

This is a meeting of the Project Board to approve (or reject) an Exception Plan.

Exception Plan

This is a plan that often follows an Exception Report. For a Stage Plan exception, it covers the period from the present to the end of the current stage. If the exception were at a project level, the Project Plan would be replaced.

Exception Report

A report which describes an exception, provides an analysis and options for the way forward and identifies a recommended option. It is given by the Project Manager to the Project Board.

Executive

The chairperson of the Project Board, representing the Customer and owner of the Business Case.

The single individual with overall responsibility for ensuring that a project or programme meets its objectives and delivers the projected benefits. This individual should ensure that the project or programme maintains its business focus, that it has clear authority and that the work, including risks, is actively managed.

F

Feasibility Study

A feasibility study is an early study of a problem to assess if a solution is feasible. The study will normally scope the problem, identify and explore a number of solutions and make a recommendation on what action to take. Part of the work in developing options is to calculate an outline Business Case for each as one aspect of comparison.

Follow-on Action – Recommendations

A report that can be used as input to the process of creating a Business Case/Project Mandate for any follow-on PRINCE2 project and for recording any follow-on instructions covering incomplete products or outstanding issues. It also sets out proposals for Post Project Review of the project's products.

G

Gantt Chart

This is a diagram of a plan's activities against a time background, showing start and end times and resources required.

Gateway

A generic term, rather than a PRINCE2 term, meaning a point at the end of a stage or phase where a decision is made whether to continue with the project. In PRINCE2 this would equate to an End Stage Assessment.

H

Highlight Report

Report from the Project Manager to the Project Board on a time-driven frequency on stage progress.

I

Issue Log

A log of all Project Issues including requests for change raised during the project, showing details of each issue, its evaluation, what decisions about it have been made and its current status.

L

Lessons Learned Report

A report that describes the lessons learned in undertaking the project and that includes statistics from the quality control of the project's management products.   It is approved by the Project Board and then held centrally for the benefit of future projects.

O

Off-Specification

Something that should be provided by the project, but currently is not (or is forecast not to be) provided. This might be a missing product or a product not meeting its specification.

Outcome

The term used to describe the totality of what the project is set up to deliver, consisting of all the specialist products. For example, this could be an installed computer system with trained staff to use it, backed up by new working practices and documentation, a refurbished and equipped building with all the staff moved in and working or it could

be a new product launched with a recruited and trained sales and support team in place.

P

Peer Review

Peer reviews are specific reviews of a project where personnel from within the organisation and/or from other organisations carry out an independent assessment of the project. The purpose of peer reviews is to introduce a fresh perspective to the project and to encourage shared learning across other projects. Peer reviews can be done at any point within a project but are often used at stage-end points.

Phase

A part, section or segment of a project, similar in meaning to a PRINCE2 stage.   The key meaning of 'stage' in PRINCE2 terms is the use of management stages, i.e. sections of the project to which the Project Board only commits one at a time. A phase might be more connected to a time slice, change of skills required or change of emphasis.

Post Implementation Review

See *Post Project Review*.

Post-Project Review

One or more reviews held after project closure to determine if the expected benefits have been obtained. Also known as Post-Implementation Review.

PRINCE2

A method that supports some selected aspects of project management.   The acronym stands for PRojects IN Controlled Environments.

PRINCE2 Project

A project whose product(s) can be defined at its start sufficiently precisely so as to be measurable against pre-defined metrics and that is managed according to the PRINCE2 method.

Process

That which must be done to bring about a particular outcome, in terms of information to be gathered, decisions to be made and results that must be achieved.

Producer

This role represents the creator(s) of a product that is the subject of a Quality Review. Typically it will be filled by the person who has produced the product or who led the team responsible.

Product

Any input to or output from a project. PRINCE2 distinguishes between management products (which are produced as part of the management or quality processes of the project) and specialist products (which are those products which make up the final deliverable). A product may itself be a collection of other products.

Product Breakdown Structure

A hierarchy of all the products to be produced during a plan.

Product Checklist

A list of the major products of a plan, plus key dates in their delivery.

Product Description

A description of a product's purpose, composition, derivation and quality criteria. It is produced at planning time, as soon as the need for the product is identified.

Product Flow Diagram

A diagram showing the sequence of production and interdependencies of the products listed in a Product Breakdown Structure.

Programme

A portfolio of projects selected, planned and managed in a co-ordinated way.

Project

A temporary organisation that is created for the purpose of delivering one or more business products according to a specified Business Case.

Project Assurance

The Project Board's responsibilities to assure itself that the project is being conducted correctly.

Project Brief

A description of what the project is to do; a refined and extended version of the Project Mandate, which has been agreed by the Project Board and which is input to Project Initiation.

Project Closure Notification

Advice from the Project Board to inform the host location that the project resources can be disbanded and support services, such as space, equipment and access, demobilised.

Project Closure Recommendation

Notification prepared by the Project Manager for the Project Board to send (when the Board is satisfied that the project can be closed) to any organisation that has supplied facilities to the project.

Project Initiation Document (PID)

A logical document that brings together the key information needed to start the project on a sound basis and to convey that information to all concerned with the project.

Project Issue

A term used to cover either a general issue, query, a Request for Change, suggestion or off-specification raised during a project. Project Issues can be about anything to do with the project.

Project Management

The planning, monitoring and control of all aspects of the project and the motivation of all those involved in it to achieve the project objectives on time and to the specified cost, quality and performance.

Project Management Team

A term to represent the entire management structure of Project Board, Project Manager, plus any Team Manager, Project Assurance and Project Support roles.

Project Manager

The person given the authority and responsibility to manage the project on a day-to-day basis to deliver the required products within the constraints agreed with the Project Board.

Project Mandate

Information created externally to the project, which forms the terms of reference and is used to start up the PRINCE2 project.

Project Plan

A high-level plan showing the major products of the project, when they will be delivered and at what cost. An Initial Project Plan is presented as part of the Project Initiation Document. This is revised as information on actual progress appears. It is a major control document for the Project Board to measure actual progress against expectations.

Project Quality Plan

A plan defining the key quality criteria, quality control and audit processes to be applied to project management and specialist work in the PRINCE2 project. It will be part of the text in the Project Initiation Document.

Project Records

A collection of all approved management, specialist and quality products and other material, which is necessary to provide an auditable record of the project.
Note
This does not include working files.

Project Start-up Notification

Advice to the host location that the project is about to start and requesting any required Project Support Services.

Project Support Office

A group set up to provide certain administrative services to the Project Manager. Often the group provides its services to many projects in parallel.

Q

Quality

The totality of features and characteristics of a product or service that bear on its ability to satisfy stated and implied needs. Also defined as 'fitness for purpose' or 'conforms to requirements'.

Quality Management System

The complete set of quality standards, procedures and responsibilities for a site or organisation.

Quality Review

A Quality Review is a quality checking technique with a specific structure, defined roles and procedure designed to ensure a products completeness and adherence to standards. The participants are drawn from those with an interest in the product and those with the necessary skills to review its correctness. An example of the checks made by a Quality Review is 'does the document match the Quality Criteria in the Product Description?'

Quality System

See Quality Management System.

R

Request For Change

A means of proposing a modification to the current specification of a product. It is one type of Project Issue.

Reviewer

A person asked to review a product that is the subject of a Quality Review.

Risk Log

A document that provides identification, estimation, impact evaluation and countermeasures for all risks to the project. It should be created during the start-up of the project and developed during the life of the project. Also known as a Risk Register.

Risk Register

See Risk Log.

S

Senior Responsible Owner

This is not a PRINCE2 term, but is used in many organisations. Its equivalent in PRINCE2 terms would be Executive.

Senior Supplier

The Project Board role that provides knowledge and experience of the main discipline(s) involved in the production of the project's deliverable(s). Represents the supplier(s) interests within the project and provides supplier resources.

Senior user

A member of the Project Board, accountable for ensuring that user needs are specified correctly and that the solution meets those needs.

Sponsor

Not a specific PRINCE2 role but often used to mean the major driving force of a project. May be the equivalent of Executive or Corporate/Programme Management.

Stakeholders

Parties with an interest in the execution and outcome of a project. They would include business streams affected by or dependent on the outcome of a project.

Supplier

The group or groups responsible for the supply of the projects specialist products.

T

Team Manager
An optional role that may be employed by the Project Manager to manage the work of Project Team Members.

Tolerance

The permissible deviation above and below a plan's estimate of time and cost without escalating the deviation to the next level of management. Separate tolerance figures should be given for time and cost. There may also be tolerance levels for quality, scope, benefit and risk. Tolerance is applied at project, stage and team levels.

U

User(s)

The person or group who will use the final deliverable(s) of the project.

W

Work Package

The set of information relevant to the creation of one or more products. It will contain the Product Description(s), details of any constraints on production such as time and cost, interfaces, and confirmation of the agreement between the Project Manager and the person or Team Leader who is to implement the Work Package that the work can be done within the constraints.

Appendix: Processes/Components Matrix

The matrix below is reproduced from Lesson 1 and shows the relationships that exist between the PRINCE2 Processes and the PRINCE2 Components.

	Organisation	Plans	Controls	Stages	Man. of Risk	Quality	Config. Man.	Change Control
SU	X	X	X		X	X		
IP		X	X	X	X	X	X	
DP		X	X	X	X			
CS		X	X	X		X	X	X
MP		X	X			X	X	
SB	X	X	X	X	X			
CP		X	X				X	
PL		X	X			X		