



# **Project Management Method**

## ***Foundation Notes***

## **BACKGROUND**

Prince2 stands for **PR**ojects **IN** Controlled **E**nvironments.

It is NOT:

- software
- a planning tool (such as MS Project 2000)
- not 'carved in stone': it is flexible
- not overly cumbersome or bureaucratic
- not restricted to IT projects, large or small
- not a guarantee of success, but its usage can limit failures

It IS:

- Basically a book produced originally by the CCTA (Central Computer and Telecommunications Agency) but now administered by the OGC (Office of Government Commerce); it describes a structured method of starting up, running and closing a project of any size
- The Title is "***Managing Successful Projects with Prince2***"

## **HISTORY**

- The origins of Prince2 to go back to 1975, when Simpect Systems Ltd. created a method called PROMPT to manage IT projects.
- In 1984, the UK government adopted it and mandated it to use for a series of large scale government IT projects.
- The CCTA was charged with promoting and implementing it.
- In 1987 the CCTA decided to created and adopt an updated PROMPT, which was to take into account real world experience and latest thinking.
- PRINCE was released in 1989.
- The name PROMPT was not retained for copyright/trademark reasons. PRINCE was declared a public domain product. Anyone could use it without royalty or licensing fees (GRRRR!!!!)
- It was successful in private and public IT projects, but it was decided to make a new version which was simpler, more able to move into non-IT and smaller scale projects. The CCTA collaborated with many external entities to do this.
- Prince2 was launched in October 1996.

## **WHY DO PROJECTS FAIL?**

- Failure rates for projects across all sectors are 80%: only 20% come in on time; on budget; on spec.
- Six main reasons for project failure:
  1. Lack of sound business case - project not worthwhile to begin with
  2. Lack of understanding of the end product
  3. Lack of management structure with clear roles and responsibilities
  4. Failure to plan, monitor and control
  5. Failure to communicate plans to all stakeholders
  6. Inadequate systems to manage risk, change and quality

Prince2 addresses the above by:

- Mandating that a project be based on a sound business case, balancing benefits against risks + costs
- Focusing on quality of products/deliverables
- Providing communications mediums/channels for all staff
- Ensuring work progresses in the right sequence and that the progress is transparent to management
- Ensuring a project can start, stop, then restart under management control if needed
- It's a public domain method, so costs are low
- De-facto standard means knowledge is widely available in the marketplace for jobs and training.

## **BASIC CONCEPTS OF Prince2**

Generally speaking, there 4 main aspects to complete any job or work task...

1. The Method: How do you approach it? How is work organized? Who does what? How will things be communicated? How will things be monitored?
2. The Procedures: The specific job instructions: what must be done and the order it is to be done in?
3. The Techniques: Tricks of the trade, the skillset needed to get the job done.
4. The Tools: What things/aids do you need to get the job done?

Prince2 does not mandate specifics for techniques or tools, but provides general guidance as to selecting the most appropriate ones.

- Product based planning, critical path analysis and GANTT charts are some of the techniques Prince2 can work with.
- Very often MS Project is a tool that is used, but this is not mandatory

**Prince2 does not operate in isolation from any organization: it is flexible enough to work within an organization.**

It works in the following framework...

|   |
|---|
| <b>Prince2</b>  |
| <b>BUSINESS CASE FOR THE PROJECT</b><br><br>This is needed to ensure that the project is one which is always worth doing. It must analyze the benefits of the Project vs. the risks + costs.        |
| <b>EXISTING COMPANY SYSTEMS, PROCEDURES, STANDARDS, CULTURE, EXPERIENCE AND BEST PRACTICE.</b><br><br>This is the basic foundation for the project.<br><br><b>(ISO9000 STANDARDS INCLUDED HERE)</b> |

## **PRINCE 2: Its 3 main elements and their makeup**

- **Components** are broken down to 8.
- **Processes** are the management procedures which run from conception to closedown of a Project. There are 8.
- **Techniques**: Prince2 does not provide complete, comprehensive details, but gives 4 specific techniques that are useful

| <b>Prince2 IS...</b>   |  |  |
|--|--|--|
| <b>COMPONENTS</b>  | <b>PROCESSES</b>   | <b>TECHNIQUES</b>  |
| <p><u>1. Organization</u>: Defining roles, responsibilities and relationships for the people doing the Project.</p> <p><u>2. Planning</u>: Occurs across the board; products, activities and resources.</p> <p><u>3. Controls</u>: Right products at the right time, and that the Project remains valid against the business case.</p> <p><u>4. Stages</u>: Partitions of the Project, grouping logically related activities. Punctuated by decision points. At least 2 stages even in smallest project- Initiation Stage and then Remainder of the Project</p> <p><u>5. Risk Management</u>: Critical in Prince2</p> <p><u>6. Quality</u>: Strong emphasis on deliverables.</p> <p><u>7. Configuration Management</u>: Systems for tracking and controlling projects and the documentation.</p> <p><u>8. Change Control</u>: Prince2 defines procedures for managing change</p> | <p><u>1. SU: Start Up</u>: A pre-project process. The business case is developed here - is the project worthwhile and viable? Done before resources are requested.</p> <p><u>2. IP: Initiating Project</u>: Aimed at creating a good baseline for the Project and that everyone understand the Projects goals and their own roles.</p> <p><u>3. DP Directing Project</u>: From start-up to closedown, it is aimed at the Project Board, as defined in the Organization Component</p> <p><u>4. CS. Controlling Stage</u>: This is everyday project management process: authorising work, monitoring progress and reporting progress to senior management.</p> <p><u>5. MP. Managing Product Delivery</u>: The 'main workshop' of the project, most resources consumed here; products of the Project are created</p> <p><u>6. SB. Stage Boundary Management</u>: Gives Project Board key decision points, to allow progression to next stage</p> <p><u>7. CP Closing Project</u>: A controlled and orderly close for the Project, either on time/natural end or prematurely. Lessons Learned report is important output here.</p> <p><u>8. PL. Planning Process</u>: Runs throughout the Project (like Directing a project) and is common to all processes. Both a process and a component. Common to all the other 7 processes - used by all 8 processes.</p> | <p><u>1. Product Based Planning</u>: Including product breakdown structures, product flow diagrams &amp; product descriptions</p> <p><u>2. Quality Reviews</u>: Involved people meet to discuss and assess completed product for errors, omissions and non-compliance with stated quality criteria</p> <p><u>3. Change Control Approach</u>: Set of techniques to manage inevitable changes as the Project progresses. Many organizations have internal, existing ones; these can be applied but only provided they do not conflict with Prince2 guidelines.</p> <p><u>4. Project Filing</u>: General recommendations on systems and techniques to make sure all information is filed both in an orderly and easily retrievable format.</p> <p><i>Also, existing techniques that are already in use, that work well for the organization and do not conflict with Prince2 can be used.</i></p> |

## **Prince2 MANUAL: A Breakdown**

- The Prince2 Manual was subjected to its first major revision in 1998. From a Ringbinder format to a bound book, colour change is slight
- Content was changed slightly in 1998 - especially wrt how it applies in a Multi-Project/Programme environment.
- First 30 pages are: Contents List + Introduction & Method
- 3 main sections deal with:
  - COMPONENTS
  - PROCESSES
  - TECHNIQUES
- Last 60 pages are Glossaries, Appendices and Further Information

## **Prince2 PROJECT STRUCTURE: A Breakdown**

All Prince2 Projects must share some very basic characteristics in terms of their structure:

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| <b>1. BUSINESS CASE</b><br><br>Has a clearly stated business case showing benefits and risks                                 | <b>2. ORGANIZATION</b><br><br>Has an organized structure identified with defined roles and responsibilities of all  | <b>3. PRODUCTS</b><br><br>Can show a properly defined and unique set of deliverables/products                                      |
| <b>4. ACTIVITIES</b><br><br>Has a corresponding set of activities and resources necessary to bring the products into reality | <b>5. LIFECYCLE</b><br><br>Has a finite lifespan, with clear stages and suitable arrangements for monitoring and controls for the duration of the lifecycle | <b>6. PROCESSES</b><br><br>Has processes and associated techniques that guides the Project and bring it to a successful conclusion |

## **STAGES are VERY IMPORTANT!!!**

- A Prince2 Project is divided into a number of Management Stages. They form a distinct unit for management purposes.
- These stages run in sequence and DO NOT OVERLAP.
- They are separated by decision points, or stage boundaries: this enables management to authorise or prevent progress to the next stage.
- Project stages correspond to natural steps in the project life cycle; boundaries are designed to correspond to completion of major products & key decision points for resource commitment.
- Prince2 allows that Projects are rarely taken in isolation. Output for one project can be the input for another.
- Many projects can be sharing common resources: this environment is a multi-project or Programme Environment.
- Prince2 gives a mechanism for defining the boundary of an individual Project and its relationship to other projects in the Programme Environment.

## **Prince2 COMPONENTS: Organization**

- Organization and staffing are critical for Prince2 projects
- Prince2 assumes that all projects take place within a customer / supplier environment
  1. Customer: Defines requirement, pays for project and is the end USER.
  2. Supplier: Provides skills and know how to create the end product.

This approach is then combined with the need for a sound business case for the Project. The 3 interests then form the Prince2 management structure.

### **The Project Board**

- Focal point of PRINCE 2 organization structure is the PROJECT BOARD.
- It is the overall authority of the Project and is responsible for initiation, direction, review & closure.
- It is the highest authority for the Project, responsible only to a corporate strategy body, such as a Board of Directors.
- Prince2 defines it as Corporate/Programme Management, and they hand over the PROJECT MANDATE to initiate the project.
- The Project Board needs to represent the customer, the supplier & the business interest. The Project Board is usually comprised of 3 distinct roles.
  1. Senior User (Customer Interest),
  2. Senior Supplier (Supplier Interest)
  3. Executive (Business Interest)
- These are roles, not jobs titles or individuals. The 3 interests must be properly represented...and a Project Board must exist.
- In small projects, the role of Senior User and Executive can be combined. In very large projects, there may need to be a team of people representing each role.



## **Prince2 COMPONENTS: Organization: The Project Board described in detail**

- Each of the 3 roles has very clearly defined responsibilities:
- The Executive:
  1. This is the key role and is ultimately responsible for the entire project, supported by the other two roles.
  2. It owns the business case for the Project and needs to ensure the Project is delivering value.
  3. The Executive normally chairs meetings of the Project Board. Conflict resolution plays a key role here.
  4. If 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 that ability to the Executive.
- The Senior User:
  1. This role represents the interests of all those who will use or be impacted by the Project and its product(s).
  2. The senior user is responsible for specifying user needs and commitment of user resources
  3. The senior user must monitor what is being produced, ensure that it will meet user needs of the users, that the expected benefits of the project will materialise, that it is going to meet the user's interests and have minimal negative impact on other parties.
  4. In some large projects, the senior user role may need to be filled by more than one person.
- The Senior Supplier:
  1. Represents the interests of those designing, developing, implementing procuring or facilitating the products.
  2. This role is sometimes filled by people external to the organization (i.e. a senior consultant from Accenture)
  3. Otherwise, it is usually someone from an IT department, or from Accounting (for SAP), or someone who deals with contracts with external suppliers

## **Prince2 COMPONENTS: Organization: The Project Manager & Team Manager Role**

- The Project Board members generally work only part time on the project: they generally have many other commitments/hats to wear.

### **Project Manager**

- Prince2 demands that a fourth role be mandated: that of Project Manager
- The Project Manager plans and oversees the day to day work of the Project.
- Must ensure that the Project is delivering the right product at the right time to the right standard of quality and under budget.
- The Project Manager role relates to 1 person: on large projects, Team Managers may be appointed to support the Project Manager during some complex technical stages that demand specialist knowledge
- The Program Manager is there to ensure that the result is achieved that the benefits outlined in the Project Initiation document are achieved.
- Specific responsibilities of the Project Manager are:
  - Overall planning for the Project
  - Motivation and leadership of staff
  - Definition of responsibilities for specialist Team Managers (if applicable)
  - Liaison with Programme Management over related projects
  - Reporting progress and raising issues to the Board

### **Team Manager**

- Appointment of Team Managers is optional, depending on the scope of the Project.
- When existing, the Team Managers must manage the creation and delivery of specialist work packages under their control, as per definition of Project Manager
- Team Manager works with the Project Manager to define responsibilities for Team Members and give planning/leadership
- Any suggested changes to products by the Team Manager can be raised informally or as Project Issues and given to the Project Manager for a decision/action.
- Team Managers attend and (usually) run Checkpoint Meetings, which raise Checkpoint Reports for the Project Manager. These are used to provide Highlight Reports to the Project Board.

## **Prince2 COMPONENTS: Organization: Project Support Function & The Project Assurance Function**

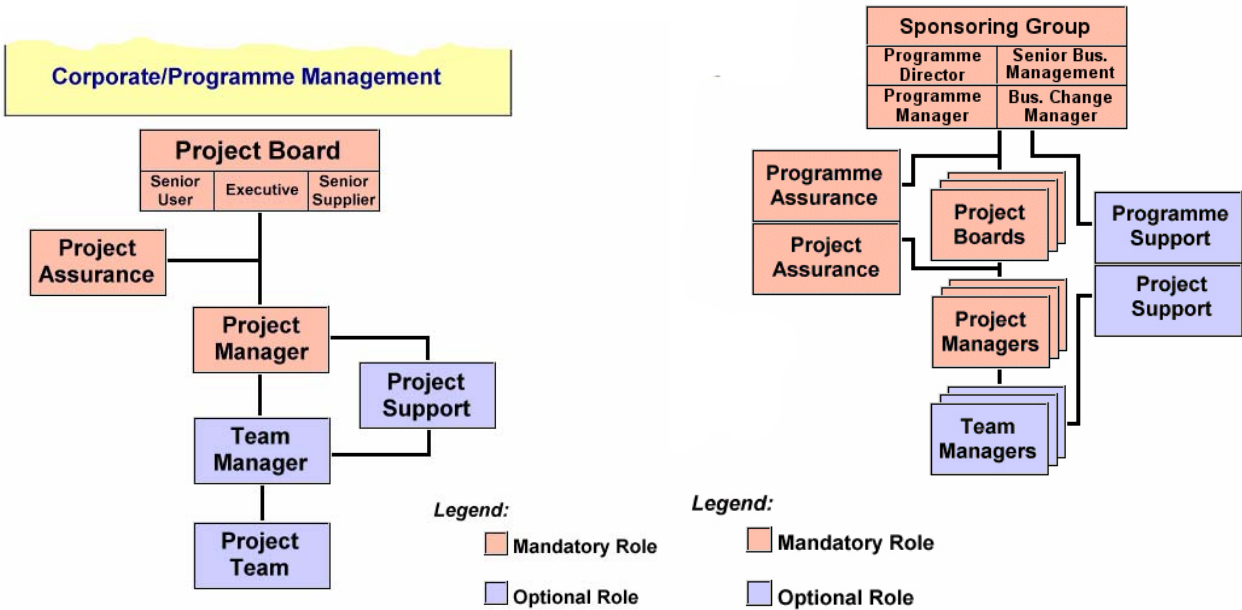
### Project Support

- If the project is very large, administration may go beyond the abilities of the Project and Team Managers.
- The Project Board may then establish a Project Support Function
- Prince2 makes Project Support optional where needed:
- Many large organizations have a project support function already existing
- Tasks of the Project Support function can include...
  1. Setting up and maintaining the documentation and filing system
  2. Updating plans and assessing the impact of change
  3. Configuration management and change control
  4. Minuting of meetings and report compilation
  5. Defining and maintaining project standards

### Project Assurance

- Project Board members place much reliance on the Project Manager, as they cannot work on the Project full time...but can they trust what the Project Manager says all the time?
- Need for an ongoing, independent assessment of the Project's real status
- The Project Assurance function assesses all aspects of the Project's performance and products, independent of the Project Manager
- Prince2 makes Project Assurance mandatory; it must be separate from the Project Support Function.
- In some cases, the Project Support Office is providing both the Support Function and the Assurance Function; in such instance, great care must be taken to ensure that there is no conflict of interest and that there is a clear distinction between the work being done for the Project Manager and Assurance work being done for the Project Board.
- Project Assurance is the responsibility of each Project Board member and the responsibility cannot be delegated, though some of the work can be
- Project Assurance must NEVER be delegated to the Project Manager or Teams.

**Prince2 COMPONENTS: Organization: The Basic Organization Charts**



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## **Prince2 COMPONENTS: Plans: The Basics & Project Plans**

- Prince2 does not state what sort of plans must be used, but it does incorporate principles of product based planning
- A GANTT chart is not really a complete project plan, though many people think it is.
- A Prince2 plan is very comprehensive. It states:
  1. What has to be produced
  2. What has to be done to produce it
  3. What has to be done to make sure it is produced correctly
  4. When it will be produced
  5. How progress will be monitored
  6. What must be done to control risk
- There are up to 3 planning levels in Prince2:
  1. Project Plans (mandatory)
  2. Stage Plans (mandatory)
  3. Team Plans (optional)

### **Making and using the Plans: Project Plans**

- Construction of Prince2 plans is normally on a Top>Down basis: logical descent into detail and allows for groupings of products/activities that may become a sub-project.
- Project Plan forms part of the Project Initiation document; may give some detail for early stage plans to be incorporated in it.
- The Project Plan identifies:
  1. key deliverables
  2. resource requirements
  3. total costs
  4. major control points (such as stage boundaries)
- Once The Project Initiation documented is accepted, the initial Project Plan is baselined and shows the original plan that approved the Project
- Subsequent versions of the Project Plan are produced at the end of each stage to show progress, agreed changes and revised costs duration forecasts
- This Project Plan is used by the Project Board to monitor Project deviation from original size and scope.

## **Prince2 COMPONENTS: Plans: Stage Plans & Team Plans**

### Stage Plans:

- For each stage defined in the Project plan, a stage plan is done.
- A stage plan refers to a management stage covering a discrete timeframe separated by decision points
- A Stage plan is finalised near to the end of the previous stage. This should give high confidence in its chances of success, because:
  - It is produced close to the timeframe when the planned events will take place
  - For a much shorter duration than the Project plan
  - A stage plan is developed with the benefit of hindsight of the performance of the immediate prior and all preceding stages.
- They are similar to the Project Plan in content, but with each element broken down into sufficient detail to allow for day to day control by the Project Manager

### Team Plans:

- They are usually required for all except the smallest projects.
- They are developed parallel with the Stage plan and drop the Stage plan to a great level of detail.
- The Team Manager produces the Team Plan in conjunction with the Team Members and with the agreement of the Project Manager. This takes place during the Managing Product delivery process.
- Team plans often reflect work to be carried out during a Technical Stage within a Management Stage of a Project.
- Prince2 does not require the production of Team Plans for individual members (also known as Work To lists), but they can be drawn up if the Project or Team Manager desires it.

## **Prince2 COMPONENTS: Plans: Exception Plan**

- If a Plan is predicted not to finish within agreed tolerances, then an Exception Plan may need to be produced.
- Exception Plans are produced at the same level of detail of the plan they replace. Most of these plans are created to replace a Stage Plan, but they can replace any plan...including the Project Plan.
- An Exception Plan picks up from current Stage Plan action and continues to the end of the Stage.
- It has the same format as the Plan it is replacing, but the text will cover why the Exception plan is needed, what will be the impact on the Project Plan and the Business case and the associated risks
- This extra information comes from the Exception Report.
- Exception Plans always need the Approval of the Project Board.

## **Prince2 COMPONENTS: Controls: Introduction**

- Any Project Management method must allow management at all levels to exercise control over what has been approved.
- Control is about decision making and is the central role of project management. The purpose of control is to:
  1. Ensure that the project is producing the required products that meet the defined acceptance criteria
  2. Project being carried out to schedule and budget
  3. Project remains viable against the business case
- Controls ensure that for each level of a Project Management team, the levels above can:
  1. Monitor progress
  2. Compare achievement with the Plan
  3. Review plans and options against future scenarios
  4. Detect problems
  5. Initiate corrective actions
  6. Authorise further work
- Controls need to cover capturing information external to the Project and taking required actions (i.e. change in price of raw materials, political developments or economic downturn etc)
- Prince2 applies concept of Management by Exception as far as the Project Board is concerned.
- Once having approved the Stage Plan, the Board is kept informed by reports during the Stage: no need for Progress meetings during the stage. The Project Manager should advise if any exception situation is forecast.
- The Project Board's Major Controls are:
  1. Project Initiation: Should the project be undertaken?
  2. Highlight Reports: Regular Project reports during a stage, prepared by the Project Manager after analysing checkpoint reports prepared at Team Level.
  3. Exception reports: early warning of forecast deviation beyond tolerance levels.
  4. Mid stage assessment: the Project Board considers what action to consider given a forecast deviation.
  5. End stage assessment: has the stage been successful?; is the Project on course?; is the biz case viable?; are risks still under control?; should the next stage be undertaken?
  6. Project Closure: has the Project delivered everything expected? Is a follow-up stage necessary? What lessons are there to be learned?



## **Prince2 COMPONENTS: Controls: Tolerance & Stages**

### Tolerance

- No project goes 100% according to Plan. Minor departures from plan occur often.
- In order to avoid the Board being bothered by unimportant deviations, tolerance levels are set by the Board and delegate them to the Project Manager
- As a stage advances, the definition of a 'significant departure' is that the tolerance has been or likely will be exceeded.
- Tolerance is a major Project Board control, but it can have benefits at other levels.
  1. Project Tolerance: set by Corporate or Programme Management
  2. Stage Tolerance: agreed by the Project Board at the beginning of a management stage and delegated to the Project Manager
  3. Product Tolerance: usually recorded in the work package, agreed between the Project Manager and the Team manager who has responsibility for the product.

### Stages

- Stages are an important control mechanism; they are partitions of the Project with decision points at their conclusion (and sometimes within their lifetime)
- Prince2 differentiates between 2 stages: management stages and technical stages
  1. Management stages: sequential periods of time; they cannot overlap or run in parallel; they are separated by Project Board decisions as to whether to continue the Project and commit resources to the next management stage.
  2. Technical stages: these comprise sets of technical activities leading towards a particular product; they often overlap and run in parallel, normally planned and managed by the Team Managers under the direction of the Project Manager;
- There must be great care to manage the interface between management stages; in most cases it is not ideal to stop work on a Project while the Project Board meets to assess the End Stage report, updated Plans, updated Business Case and next Stage Plans.
- Technical stages often overlap management stage boundaries and some degree of planning for the next management stage must be included in the current management stage.

## **Prince2 COMPONENTS: Risk Management**

- Risk is an inherent component of all projects - projects are unique and may have more unpredictability than regular process environments.
- Prince2 attempts to limit avoidable and unnecessary risks
- Prince2 defines risk as “the chance of exposure to the adverse consequences of future events”
- There are two types of risk defined by Prince2:
  1. Business Risks: Threats to the business case - even if the Project succeeds, is it still worthwhile? Also known as external risks, as they are outside the control of the Project Manager. Change in market conditions, legislative changes, changes to weather, terror attacks, political opinion are external risks. These risks are the concern of the Project Board.
  2. Project Risks: Threats to the Project being able to deliver the product on time, on budget and on spec. Includes failure of a supplier, skill shortages, misunderstanding of the products. This risk is internal to the Project and in the scope of responsibility of the Project Manager, Team Leaders and the Board.
- Risk is handled in two ways in Prince2...by RISK ANALYSIS and RISK MANAGEMENT

I: Risk Analysis: this is about what, what if and what now?

- a) Risk Identification: determine the potential risks that can happen
  - b) Risk Estimation: what is the importance/probability of each risk identified based on magnitude/likelihood
  - c) Risk Evaluation: deciding if the risk acceptable, and if not what action can be taken to make it acceptable
- Once risk has been identified, the following actions can be taken:

Prevention: Stopping the risk occurring or preventing it from having an impact on the business or project

Reduction: reducing the probability of the risk happening or reducing the impact to acceptable levels

Transfer: passing the impact of the risk to a third party (namely via insurance policy)

Contingency: where actions are planned to come into force if/when the risk occurs

Acceptance: the Project Board goes ahead, accepting the risk may happen

## **Prince2 COMPONENTS: Risk Management**

- After risks are ANALYSED (i.e. IDENTIFIED, ESTIMATED AND EVALUATED), they need to be managed.
- Risk Management consists of 4 major activities...
  1. Planning: for countermeasure actions identified during risk evaluation and developing a detailed action plan for inclusion in the Stage Plan
  2. Resourcing: identifying/assigning resources to be used for avoidance or litigation actions
  3. Monitoring: checking that planned actions are having the desired effect and watching for signs that a risk is developing
  4. Controlling: taking action to ensure events specified in the plan occur

## **Prince2 COMPONENTS: Controls: Quality in a Project Environment**

- Prince2 definition of quality is taken from ISO 8402 Standard

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

A simpler definition is...

“Fitness for purpose”

- In a project environment, quality management ensures that the products produced are fit for the intended purpose and satisfy the needs and expectations of the customer.
- This must be reflected throughout the Prince2 Project environment: ideally, it should be stated at the Project Mandate, included in the Project Brief and expanded in the Project Initiation document.
- There are 4 inter-related elements that make up Quality Management.
  1. Quality System
  2. Quality Assurance
  3. Quality Planning
  4. Quality Control
- Prince2 assumes that projects will be carried out in a formal environment covered by a published quality management system, such as ISO9001. It lays down standards for documentation of processes and procedures to ensure quality consistency.
- ISO9001 has 20 main clauses + sub clauses that must be satisfied
- Prince2 is not a quality management system in its own right, but it does contribute to such a system in its Appendix B of the Manual; it relates Prince2 to each of the 20 clauses in the ISO9001 standard
- A company must have a Quality Manual, and this Quality Manual must:
  - 1) Make a clear statement of the Company's Quality Policy, as defined by senior management
  - 2) The Quality Manual needs to document the organization structure and then outline all the processes and procedures which impact quality

## **Prince2 COMPONENTS: Controls: Quality in a Project Environment: Quality**

### Quality Assurance

- Quality Assurance function is responsible for setting up and maintaining the Quality Management system.
- QA ensures that everything that goes on in an organization is in line with laid down procedures and end results satisfy the correct standard.
- QA should be external to the Project Management department

### Quality Planning and Quality Control

- Quality Planning & Quality Control are the responsibility of Project Management
- 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.
- Customer's quality expectations must be understood and documented prior to the Project commencing. In the Project Initiation document, the quality approach for the Project is defined in the Quality Plan.
- Quality Control ensures that Projects meet the quality criteria specified
- Quality Control is about measuring/testing end products to ensure they meet the required standards. Takes place after some work has been done.

## **Prince2 COMPONENTS: Controls: Configuration Management**

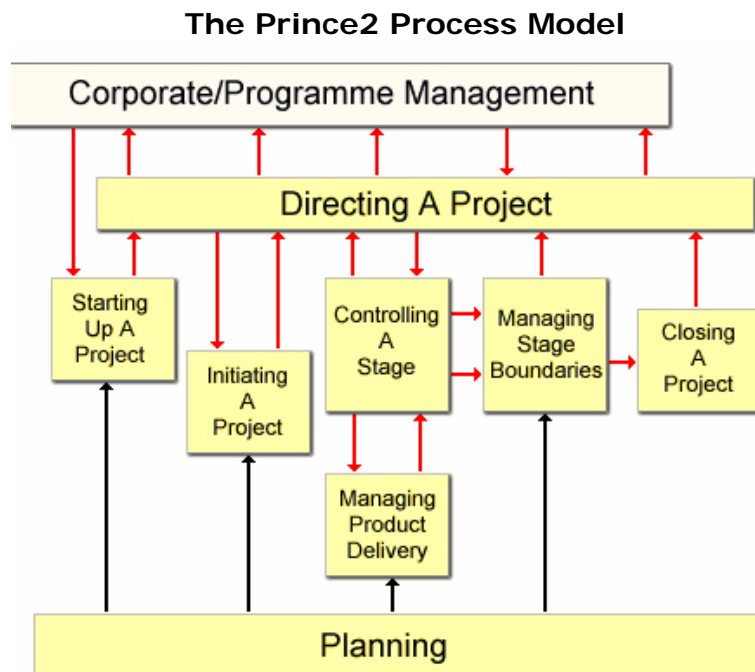
- A configuration is a logically related set of products that need to be managed as a composite set.
- In Project Management, the configuration to be managed is the sum total of all the equipment, documentation, instructions and information which together represent the product/deliverables of the project. Configuration Management is Product Control
- Configuration management occurs when you order parts for your car: configuration management enables the right part to be supplied
- Configuration Management provides techniques and procedures to:
  1. Identify the individual items that need to be managed; these are called the configuration items
  2. Record and monitor the current status of each configuration item as its development proceeds
  3. File all the documentation produced during the products life cycle
  4. Distribute record and control all the circulation of all the copies of project documentation
  5. Manage product issues raised during the project
  6. Manage changes to all the configuration items
- In Prince2, configuration management is mandatory - it's critical for successful project management. All products are controlled using an appropriate configuration management method, which allows for a way for creating, editing and deleting configuration items, identifying their owners and auditing the validity of configuration information (via a coding or referencing system). Configuration Management consists of 5 basic functions:
  1. Planning: Deciding the level at which products need to be controlled and deciding how that control is exercised
  2. Identification: Where all the sub products making up the final products are specified and identified
  3. Control: Whereby configuration items are frozen once the specification is agreed. Changes can only be made with the agreement of the appropriate named authorities
  4. Status Accounting: the recording and reporting of all current and historical data to do with the product
  5. Verification: a series of reviews and audits that the information in the configuration management system coincides with the actual status of the products themselves

## **Prince2 COMPONENTS: Controls: Change Control**

- Change Control is closely linked to Configuration Management. Change is inevitable in virtually all projects. Changes to specification or scope can greatly risk a project.
- Control of change means an assessment of their impact, their importance, their costs and a decision as to whether they should be authorised.
- Prince2 treats all potential changes to the Project's products as project issues.
- One of the considerations of Project Initiation is deciding who can authorise changes, at what level and how changes will be funded
- In a Project with few anticipated changes, the Project Board can nominate itself as the only Change Authority. In more complex environments where there may be many change requests of varying complexity, the Project Board may delegate the consideration of changes to another body called the Change Authority, who will work to a budget and within previously agreed tolerances.
- Changes and the project issues they generate should be viewed not in isolation, but should be viewed against the benefits they offer and the impacts on the original business case. Each project issue must be considered against the Risk Log: will the change impact an existing risk or create a new risk?
- If a Project exists as part of a Programme, then the impact of the change needs to be considered as how it may impact the Programme as a whole.

## **Prince2 PROCESSES: Introduction**

- A process is any operation(s) that transforms something into something else...i.e. changes inputs into outputs.
- The Processes in Prince2 are Management Processes, having both input and outputs. Inputs for are information and requests, outputs are updated information and decisions/approvals.
- The ISO9000 standard requires that all major processes be documented in a company's quality manual. Prince2 sits comfortably in an ISO system as it documents a Project Management method.



- Each of the 8 processes in Prince2 has its own inputs and outputs, the outputs for one processes sometimes being the inputs for another.
- Corporate or Programme management is the highest level process, if somewhat removed from day to day project management. Within a Project, the highest level is Directing a Project.
- The next 6 processes of a project divide into three basic stages:
  - a) beginning a project (start-up and initiating)
  - b) managing a project (controlling stage, managing stage boundaries and product delivery)
  - c) finishing a project (closing a project)
- The Planning process runs throughout a Project, providing input to the other processes.



## **Prince2 PROCESSES: Introduction: Directing**

- Directing a Project is the primary concern of the Project Board - it runs from start to closedown.
- The Project Board manages by exception, monitoring through reports provided by the Project Manager and controlling via key decision points.
- There are 5 sub processes in Directing a Project:

|      |     |                                  |                  |
|------|-----|----------------------------------|------------------|
| I.   | DP1 | Authorising Initiation           | Initiation       |
| II.  | DP2 | Authorising a Project            | Initiation       |
| III. | DP3 | Authorising Stage/Exception Plan | Stage Boundaries |
| IV.  | DP4 | Giving Ad Hoc Direction          | Ad Hoc Direction |
| V.   | DP5 | Confirming Project Closure       | Project Closure  |
- These do not cover the day to day activities of managing a Project, which rests with the Project Manager. For example a forecast that a stage will not be completed within tolerance levels will result in an exception report, which the Project Manager will raise to Board level.

## **Prince2 PROCESSES: SU - Starting Up a Project**

- The beginning of a Project is very difficult and unstructured in many cases, with managers asked to do planning and preparation work but with minimal or no official resources allocated.
- Prince2 gives structure to this process with the SU (Starting Up) phase.
- The input for starting up a project is the Project Mandate, which will often be a memo or an informal request - this is the Project Trigger
- Prince2 identifies 6 sub-processes:

| <b>Code</b> | <b>Process Type</b>                                    | <b>Description</b> |
|-------------|--|--------------------|
| SU1         | Appointing Project Board Executive and Project Manager |                    |
| SU2         | Designing a Project Management Team                    |                    |
| SU3         | Appointing a Project Management Team                   |                    |
| SU4         | Preparing a Project Brief                              |                    |
| SU5         | Defining a Project Approach                            |                    |
| SU6         | Planning an Initiation Stage                           |                    |

- I. The main output here is the Project Brief, the aim of which should allow the Project Board to decide if there is enough justification to warrant the expenditure stated in the Initiation Stage plan.

- II. The Project Brief should contain:

- I. A Statement of the Project Scope /Definition
- II. The Business Case
- III. Quality Expectations
- IV. The Known Risks

(any other useful relevant information should be included also)

- The two other outputs of the SU phase are:
  - a. The Initiation Stage Plan
  - b. Structure for the Project Management Team (these should contain nominations for the Board and the Project Manager)

## **Prince2 PROCESSES: IP - Initiating Project Stage**

- The Initiating a Project Process aims to set up a firm baseline for the Project and that everyone involved is clear what the objectives for the Project are.
- The inputs for the Initiating Project process are the Outputs for the Starting Up a Project process i.e. Initiation Stage Plan, Project Management Team Structure and the Project Brief.
- The Output is the Project Initiation Document (PID). This is used as baseline for the Project and is used at every stage - up to and including Closure - to check progress against original expectations.
- It should include clear statements of the Project objectives, risks, business case, project management team structure, overall project plans and detailed first stage plans.
- Prince2 identifies 6 sub-processes:

| <b>Code</b> | <b>Process Type</b>                  | <b>Description</b> |
|-------------|--------------------------------------|--------------------|
| IP1         | Planning Quality                     |                    |
| IP2         | Planning a Project                   |                    |
| IP3         | Refining the Business case and risks |                    |
| IP4         | Setting up Project Controls          |                    |
| IP5         | Setting up Project Files             |                    |
| IP6         | Assembling a PID                     |                    |

- The PID is assembled from products generated in starting up a project and the six sub processes in the IP. When it is approved by the Project Board, it signifies the official start of the Project.

## **Prince2 PROCESSES: CS - Controlling a Stage Process**

- The Controlling a stage process forms the bulk of the Project Manager's work.
- Prince2 recognises 9 sub-processes in the Controlling Stage process:

| Code | Process Type                     | Description |
|------|----------------------------------|-------------|
| CS1  | Authorising Work Package         |             |
| CS2  | Assessing Process                |             |
| CS3  | Capturing Project Issues         |             |
| CS4  | Examining Project Issues         |             |
| CS5  | Reviewing Stage Status           |             |
| CS6  | Reporting Highlights             |             |
| CS6  | Taking Corrective Actions        |             |
| CS6  | Escalating Project Issues        |             |
| CS6  | Receiving Completed Work Package |             |

- The sub-processes are bound into a cycle of:



## **Prince2 PROCESSES: MP - Managing Product Delivery Process**

- The objective of Managing Product Delivery is to ensure that what was planned to be produced during a stage is indeed produced.
- Progress must be reported to the Project Manager, so that they can carry out the Controlling Stage Process.
- The MP process is carried out by the Manager of the team carrying out the work (or an individual for small jobs).
- This process has an Authorised Work Package as its input and signed off Products and Progress Reports as its output.
- Prince2 defines 3 sub-processes in the Managing Product Delivery Process:

| <b>Code</b> | <b>Process Type</b>       | <b>Description</b> |
|-------------|---------------------------|--------------------|
| MP1         | Accepting a Work Package  |                    |
| MP2         | Executing a Work Package  |                    |
| MP3         | Delivering a Work Package |                    |

## **Prince2 PROCESSES: SB - Managing Stage Boundaries Process**

- The Stages Component seeks to break down a Project into discrete and manageable parcels of work, 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 stages products have been completed within tolerance levels, whether the remaining products are needed and if the Business Case is still valid. This is a key control Process of the Project Board.
- The objectives of the Managing Stage boundaries process are:
  1. Assure the Project Board that all Products in the current stage plan have been completed as defined
  2. Provide information needed for the Project Board to assess the continuing viability of the Project
  3. Obtain authorisation for the start of the next stage
  4. Record any information/lessons learned that could be useful for future stages
- The inputs to the Process are the Progress and Exception Reports, along with the Stage Plans.
- Prince2 defines 6 sub processes in Managing Stage Boundaries:

| <b>Code</b> | <b>Process Type</b>              | <b>Description</b> |
|-------------|----------------------------------|--------------------|
| SB1         | Planning a Stage                 |                    |
| SB2         | Updating a Project Plan          |                    |
| SB3         | Updating a Project Business Case |                    |
| SB4         | Updating the Risk Log            |                    |
| SB5         | Reporting Stage End              |                    |
| SB6         | Producing an Exception Plan      |                    |

- The outputs for Managing Stage Boundaries are:
  1. End Stage report
  2. Next Stage plan
  3. Request for Authorisation to Proceed to the next stage; or
  4. Exception Plan

## **Prince2 PROCESSES: CP - Closing a Project**

- Any Project needs to be finite and have a clearly defined end, otherwise it is an operational management task.
- The end of a Project arises when all the planned work is finished and the product is delivered and signed off; alternatively there can be a premature end to the Project because of changes to requirements, lack of resources or severe cost blowouts, time blowouts or quality lapses.
- The purpose of a Closing Project Process is to execute an orderly and controlled end to the Project, regardless of circumstances.
- The CP process is normally performed by the Project Manager; the majority of the work is generally preparing input for the Project Board to gain their approval that the Project may conclude.
- The main Inputs are:
  1. A Project Status Report
  2. A Lessons Learned Report (for the Final Stage)
  3. A Project Initiation Document (to provide baseline information)
- Prince2 defines 3 sub-processes in the Closing Project process:

| Code | Process Type                  | Description |
|------|-------------------------------|-------------|
| CP1  | De-commissioning a Project    |             |
| CP2  | Identifying Follow On Actions |             |
| CP3  | Project Evaluation Revue      |             |

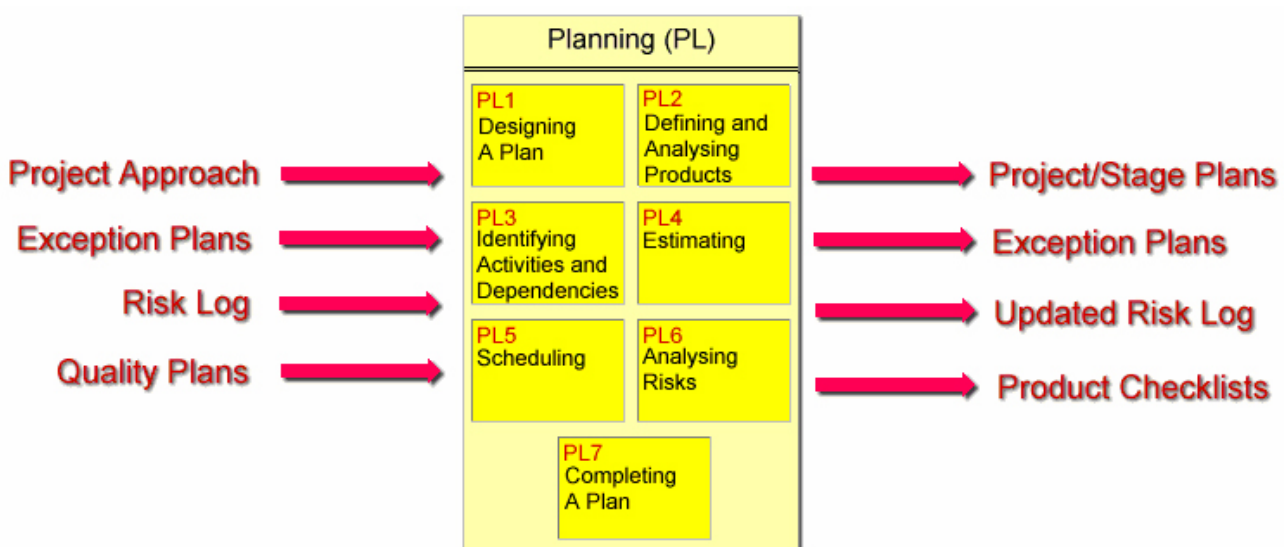
- The main Outputs are:
  1. An End Project Report. This Report needs to answer the questions such as:  
has the project initiation document been fulfilled? Is the customer satisfied?  
What ongoing maintenance will be needed? Are there any recommended follow-up actions
  2. A Lessons Learned report (for the whole project)
  3. The Project Files
- The Lessons Learned Report and the Project Files can provide valuable information for similar Projects in the future.

## **Prince2 PROCESSES: PL - Planning a Project**

- Planning underpins all the other processes.
- Traditional Project Management methods start planning by assessing the activities that will be required. Prince2 takes the angle that planning should be done by thinking about the Products that have to be produced: what products are needed, what quality is required? What order will they be produced?
- Once the initial steps are done, a traditional Project Management approach is acceptable to use in answering the following queries: what activities should be done, when and by whom? How much effort will each activity take? How long will it last? How much will it cost? What risks are involved?
- Prince2 advocates planning at 3 levels:
  1. Project Plans
  2. Stage Plans
  3. Team Plans
- Prince2 defines 7 sub-processes in the Planning a Project process:

| Code | Process Type                            | Description |
|------|---|-------------|
| PL1  | Designing a Plan                        |             |
| PL2  | Defining and analysing Products         |             |
| PL3  | Identifying Activities and Dependencies |             |
| PL4  | Estimating                              |             |
| PL5  | Scheduling                              |             |
| PL6  | Analysing Risks                         |             |
| PL6  | Completing a Plan                       |             |

- There are separate Inputs and Outputs corresponding to each level of Planning.



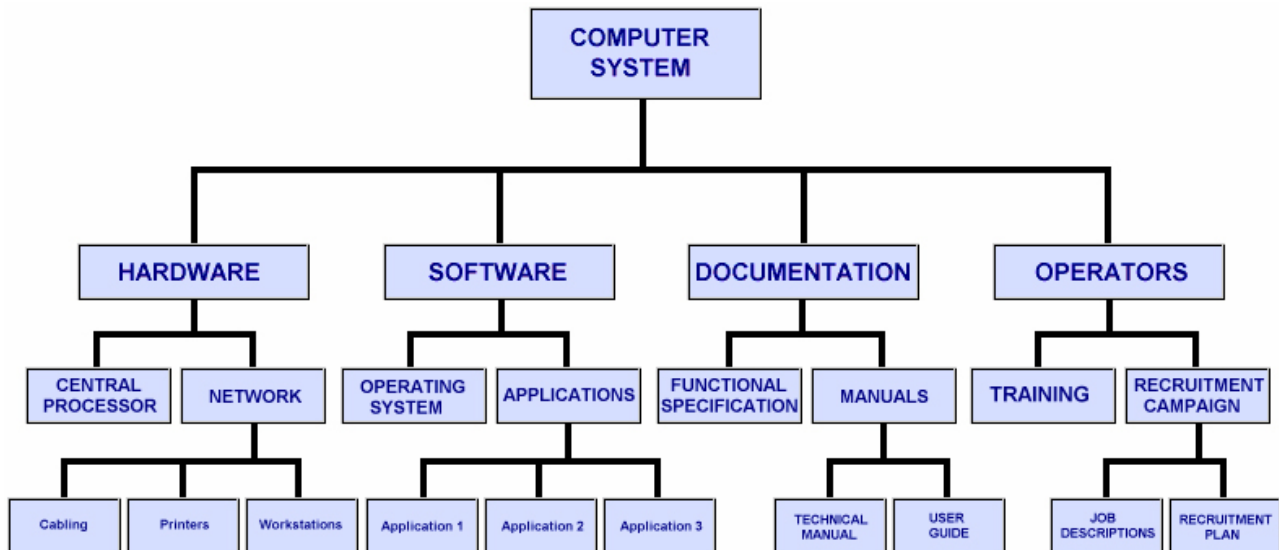


## **Prince2 TECHNIQUES: Introduction**

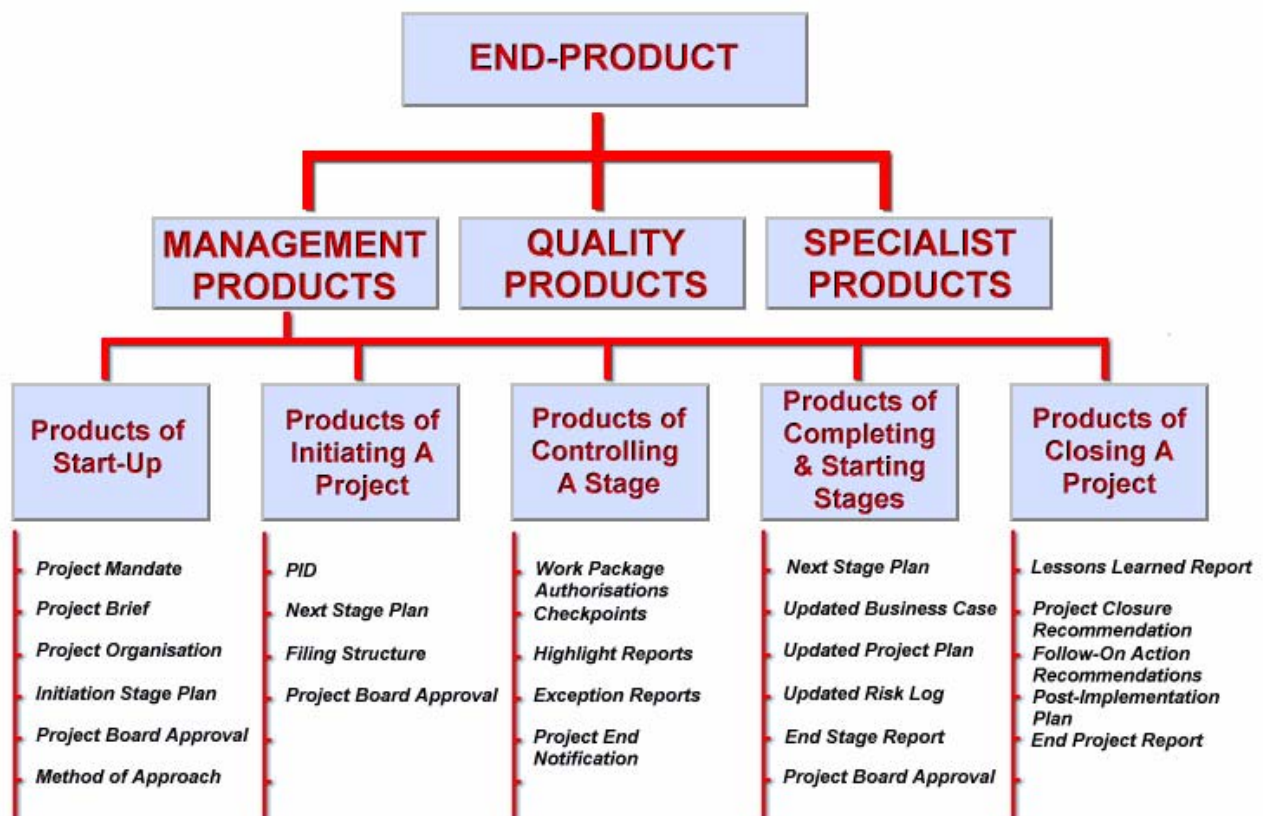
- Prince2 only gives very general techniques of how to do a job.
- Product Based Planning is a key approach:
- In the traditional Project Management Approach, the starting point is to determine all the activities that are needed to complete the Project. Prince2 emphasizes the best starting point is to understand all the Products/Deliverables that the Project must deliver.
- Product Based Planning consists of 3 main steps:
  1. The Production of a Product Breakdown Structure
  2. A Writing Product Description
  3. The Creation of Product Flow Diagrams
- Prince2 defines a product as anything that is produced by or on the way through a Project. It includes paperwork, reports and control mechanisms that are produced during a Project, not just the final end product (i.e. new accounting system or building).
- Prince2 thus divides Products into 3 categories:
  1. Management Products:
  2. Quality Products:
  3. Specialist Products: these are the subject of the Plan i.e. the end products or goals of the Project
- Management and Quality Products are the by-products of the process to deliver a Specialist Product

## Prince2 TECHNIQUES: Product Breakdown Structures

- The Product Breakdown structure takes a Top Down view of all the Products which the Project is going to generate, starting off with the Final Product that the Project is set to deliver. Then each product is broken down to its individual components in a hierarchical structure.
- The breakdown structure of a Project may look like this...this is what all the products will look like...

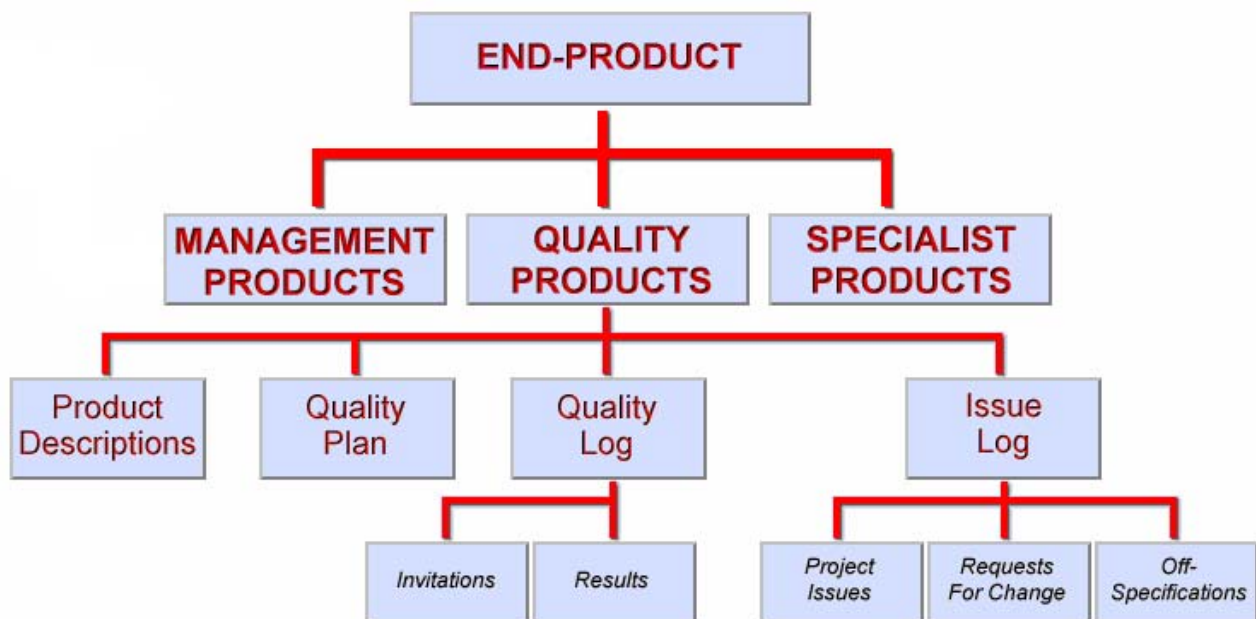


- But there are 3 sub products (Management, Quality and Specialist). Prince2 shows how Management Products can be segmented...



## Prince2 TECHNIQUES: Product Breakdown Structures (continued)

- ...and Prince2 shows how Quality Products can be segmented...

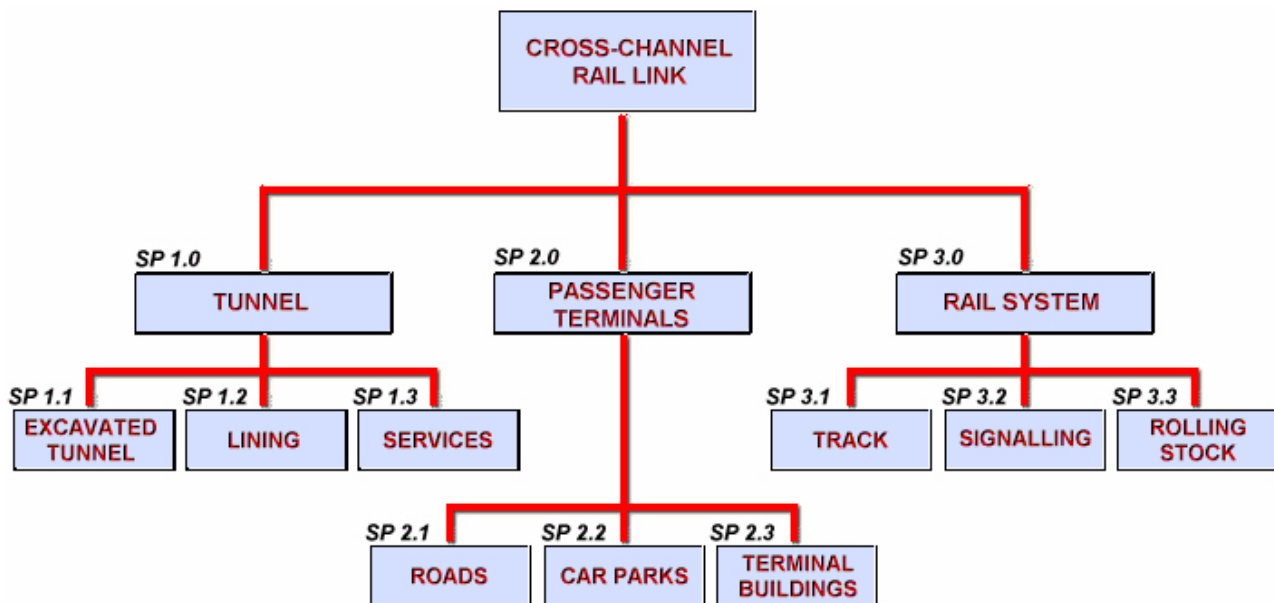


- Both branches of management and quality tend to look very similar from Project to Project, as Prince2 specifies them regardless of size or type.

## **Prince2 TECHNIQUES: Product Breakdown Structures: Specialist Products**

- The Specialist products will differ considerably from Project to Project: they would be unique to each Project and represent the reason for the Project's existence.
- For example, the Specialist Product for the Channel Tunnel could look like...

**Channel Tunnel Rail Link Structure**



- The breaking down of the major products into sub products will go on until the products are small enough for the necessary degree of day to day control given the circumstances. Deciding at which point to stop is down to experience, good judgement and common sense.
- Once a product breakdown structure is decided on that adequately represents what is to be created, a numbering system is employed so that each of the products can easily and uniquely be identified. The decimal system employed here is very common. These numbers are a very important input to the configuration management component.

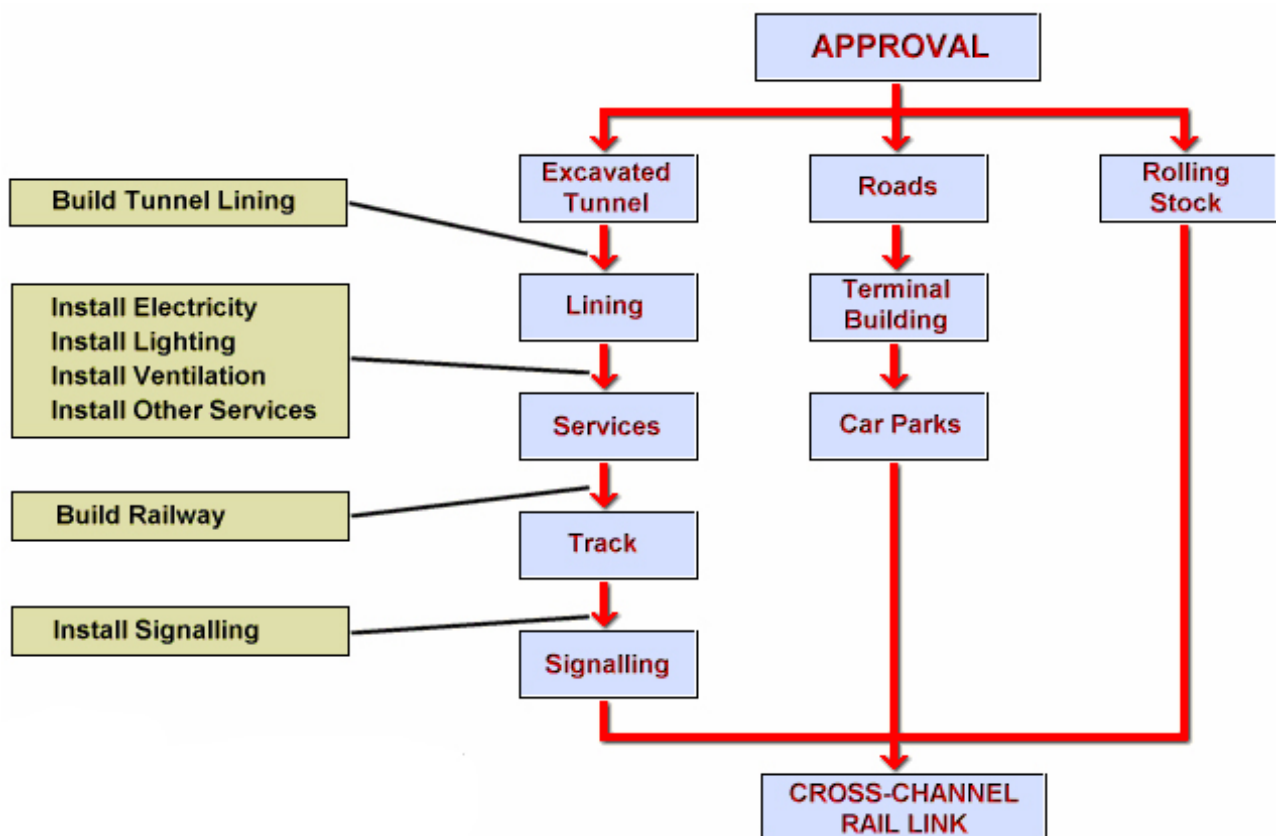
## **Prince2 TECHNIQUES: Product Descriptions**

- The Product based approach to Planning gives the major advantage that once a product has been identified and defined, responsibility for it can be assigned to an individual. This is called Product Ownership.
- If someone is given ownership, it is necessary that the Product be clearly defined, how it should look and how its acceptability will be judged. A Product Description can help here. It should also state quality expectations.
- Sometimes, writing a Product description can become overly tiresome, burdensome and time consuming. Good judgement needs to be exercised as to what level of detail and effort is needed. Products that are new, important or previously troublesome should be emphasized in more detail. Concentrate on higher level products first, then drill down into more detail.
- Products descriptions are NOT a replacement for detailed technical specifications. They are higher level documents to help the planning and production process, not an end in itself.
- Prince2 recommends the main headings that should be included in the Product Description.
  1. Purpose: Why do you need this product?
  2. Composition: What are the components that will make up this product?
  3. Derivation: From what is the product going to be produced or from where obtained?
  4. Format: how will the product be presented, what will it look like, what will it do?
  5. Quality Criteria: what criteria must the product meet for it to be judged as fit for purpose?
  6. Quality Method: How will the quality assessment be made?
- Additionally, there ideally should be on the Product Description also be details on the Product Manager, Product reference ID, Document and Version number Information.

## Prince2 TECHNIQUES: Product Flow Diagrams

- Once a complete understanding of the required products of a Project is created, the next step is the sequence in which the products must be created. This is done via a product flow diagram.
- A product flow diagram uses just two symbols: a rectangle to represent the product, and an arrow joining the rectangles to show the sequence.
- Time flows from only on direction: either top to bottom or from left to right.
- The starting point is the product(s) available right at the start of the Project, and the end points is the product that is the final deliverable(s) of the Project.

### Channel Tunnel: Approval to Proceed Product Flow Diagram



- Approval to Proceed is a Management Product.
- Each of the arrows represents a transformation from one product to another.
- The diagram shows the link between product based planning and activity based planning.

## **Prince2 TECHNIQUES: Change Control Approach**

- Most large organizations have existing change control procedures and forms: provided they satisfy the basic requirements of Prince2, they can be used in a Project.
- Under Prince2, all changes are treated as types of Project Issues, and are handled through the same change control approach. i.e. A request to change requirements or to improve a product. This is known as Request for Change.
- A failure (actual or expected) to meet a specified requirement is known as an Off-Specification.
- Any questions that arise on any Project topic can be raised as a Project Issue.
- Whatever the type, every Project Issue is sent to the Project Manager and recorded in an Issue Log. A unique number is allocated, 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 based on misunderstandings should be answered directly, a reply sent to the author, filed and the Issue Log updated.
- Remaining issues should be subjected to an Impact Analysis that will look at:
  1. What will change?
  2. What effort/resources will be needed?
  3. What is the impact on the business case?
  4. What are the risks due to the proposed change?
- The Project Manager decides which Requests for Change - if any - should be implemented in the current stage plan.
- In all cases, there should be discussions with the Senior User and Senior Supplier. Without the approval of the Project Board, the Project Manager should not authorise any work that changes the Product that has already been approved by the Board.
- In the case of Off Specification, the Project Manager should try to resolve the situation within predefined tolerance limits. If this is not possible, then Exception procedures must be followed and the Project Board's decision must be sought.
- If the Project Board decides to accept the Off Specification without correction, this is known as a Concession.
- However, if the Project is part of a Programme, neither the Project Manager or the Project Board may be able to accurately judge the impact of changes of their Project on other Projects in the Programme.
- To deal with this, there are two strategies. Firstly, one can ensure all changes must be screened at Programme level initially, to assess where the decision on change must be made. Alternatively, a representative from Programme Management can be made part of the Project's change control authorisation loop.

## **Prince2 TECHNIQUES: Quality Review**

- A Quality Review is where a team of qualified people meet for the key purpose of checking a complete product for errors. A quality review can be invoked at any point during a Project - as any Product can be subject to a review.
- The Quality Review technique has close ties to the Planning, Managing Product Delivery and Controlling Stage processes.
- Among the main benefits a Quality Review are a structured and organized approach to the examination of subjective quality criteria and the early identification of defects.
- The objectives of a Quality Review are:
  1. To ensure a Product Meets Business, User and Specialist Requirements
  2. To assess the conformity of a Product against pre-defined criteria
  3. To provide a platform for Product Improvement
  4. To involve all those with a vested interest in the Product and promote Product Ownership
  5. Provide a mechanism for monitoring and control of progress
- There are 3 basic steps in the Quality Review Procedure:
  1. Preparation: Confirm when, where the meeting will take place and who will attend (issue invitations); if possible, send out a copy of the Product for review; assess the Product against quality criteria; produce an error list to send to the producer.
  2. The Review Meeting: Should consist of discussion and clarification of major errors; agreement on appropriate follow up actions; agreement on quality review outcomes; signoff on the product (if appropriate); documentation of actions and responsibilities;  
  
The results of a Quality Review are normally 1 of 3 outcomes. The first is the Product is error free and can be signed off at the meeting. The second is that the Product contains minor errors which can corrected easily and signoff can be done without further review. The third is that errors are so serious is that the Product will have to be reviewed again after the errors are corrected.
  3. Follow-Up: This involves notifying the Team Manager of the Quality Review results; planning any remedial work required and finally signing off the Product after the remedial work is properly done.
- 1. There is actually a 4<sup>th</sup> step, but it is carried out as part of the Planning Process. This is Planning the Quality Review; it involves identifying the Products to be reviewed, who will be the people doing the reviewing and the time scales are allocated.



## **Prince2 TECHNIQUES: Quality Review**

2. The people who are normally involved in Quality Review meeting are:
  1. The Producer: usually the creator/author of the Product being reviewed
  2. The Review Chair: sets the agenda, ensures the meeting is properly organized, controls the meeting, and provides the final signoff of the product. The Review Chair is often the Producer's Line Manager, The Project Manager, or some other competent person with authority.
  3. The Reviewers: Must be competent to assess the product from various specialist viewpoints.
  4. The Scribe: To take notes/minutes and agreed actions arising from the meeting.

Also, representatives from Project Support, Project Assurance and Quality Assurance will also often take part, to provide administrative support and ensure compliance with Project and Corporate quality standards.

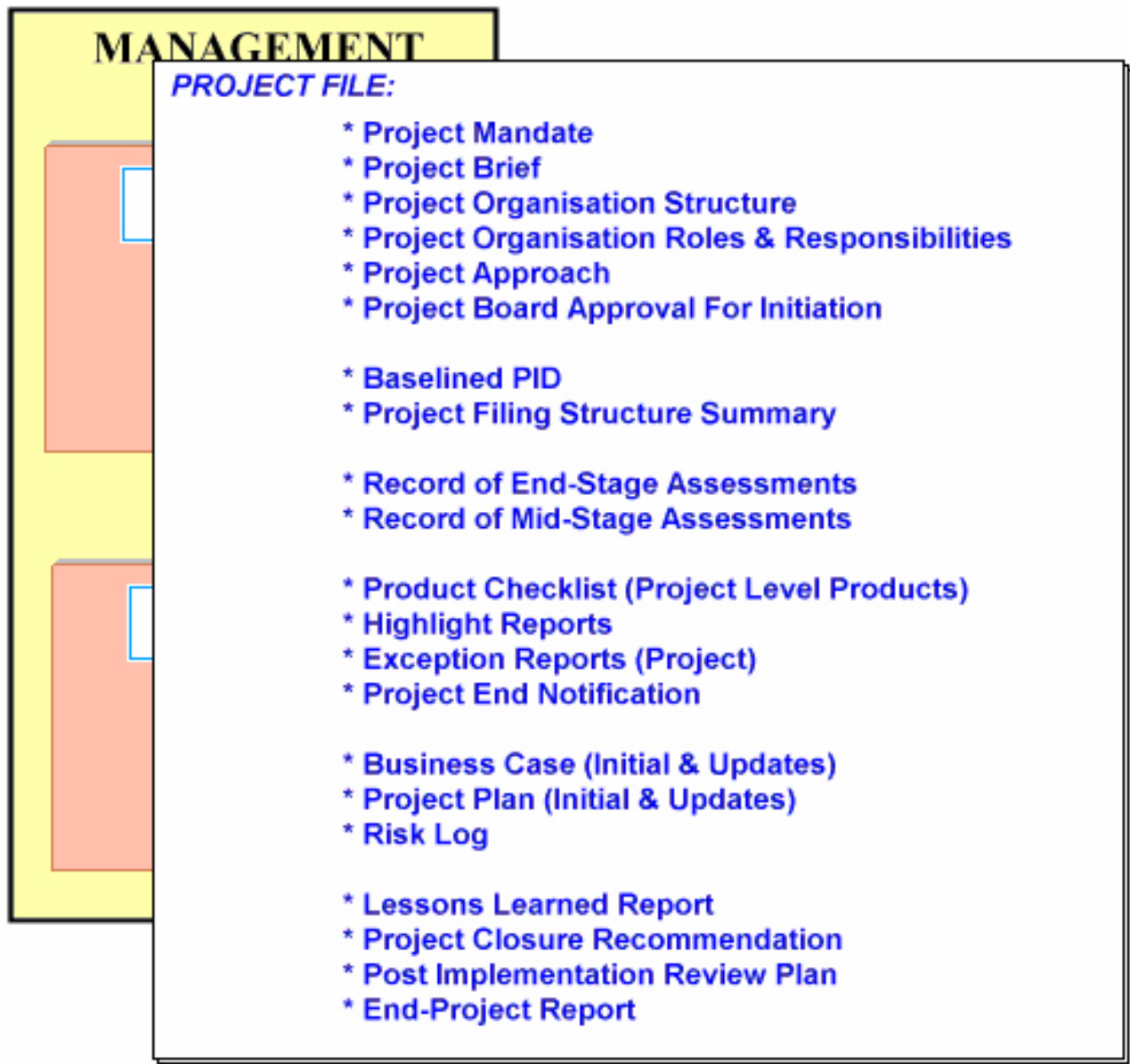
3. The Quality Review process exists to find errors in Products produced by people - sometimes people who may be present at the meeting. The scope for conflict is huge, at the expense of objectivity. Keep in mind:
  1. The Quality Review process is about the identification and agreement of defects, NOT solutions.
  2. Identify defects in the Product, NOT the Producer - do not personalize
  3. There must be preparation for the meeting by all, and pressure to do the same
  4. Managers must NOT attend a QR meeting in a people management capacity; it creates conflict and may make people overly defensive. The Chairman MUST NOT act as a Reviewer, otherwise the role becomes too complex.
  5. In an informal quality review, the Producer can be the Scribe
  6. Checklists are needed.

## **Prince2 TECHNIQUES: Project Filing: Introduction**

- Project Filing is the final technique in Prince2: there is no compunction to follow Prince2 in this respect, but it is a good system and should be considered. It is tied in with the configuration management system.
- Prince2 suggests the maintenance of 3 types of files:
  1. Management File: further subdivided into the Project File and Stage Files (one for each stage). These files contain all the documents used to manage the Project at the relevant levels. Organization charts, plans and control reports are included here.
  2. Specialist File: containing all the Configuration Items on the Project.
  3. Quality File: intended to permit an audit at any time on the work that has been done and to confirm adherence to quality standards. All Product Descriptions and Product Issues are held here.
- Further recommendations are provided next as to what should be in each file...

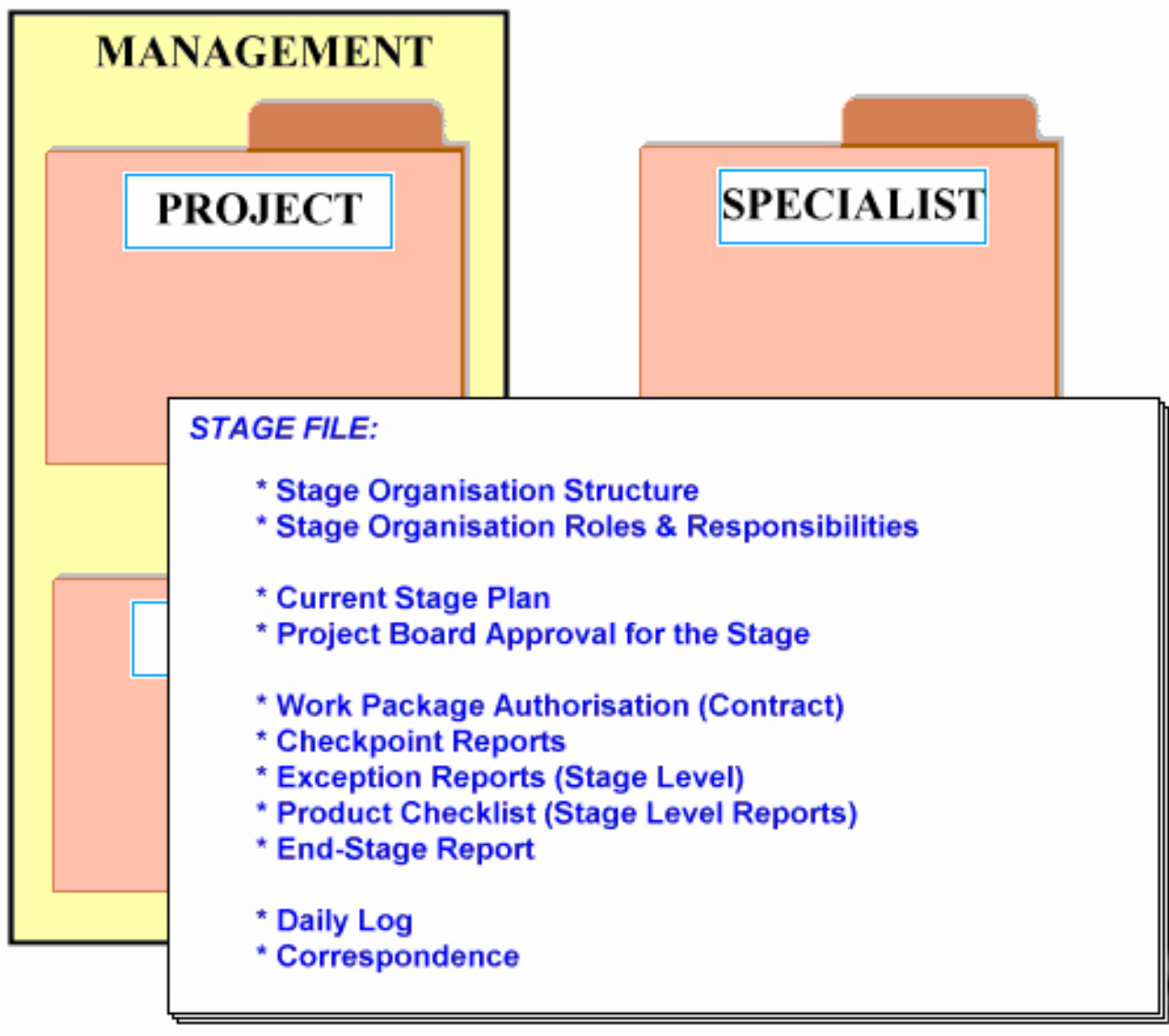
## Prince2 TECHNIQUES: Project Filing: Project File

- The Project File should ideally contain...



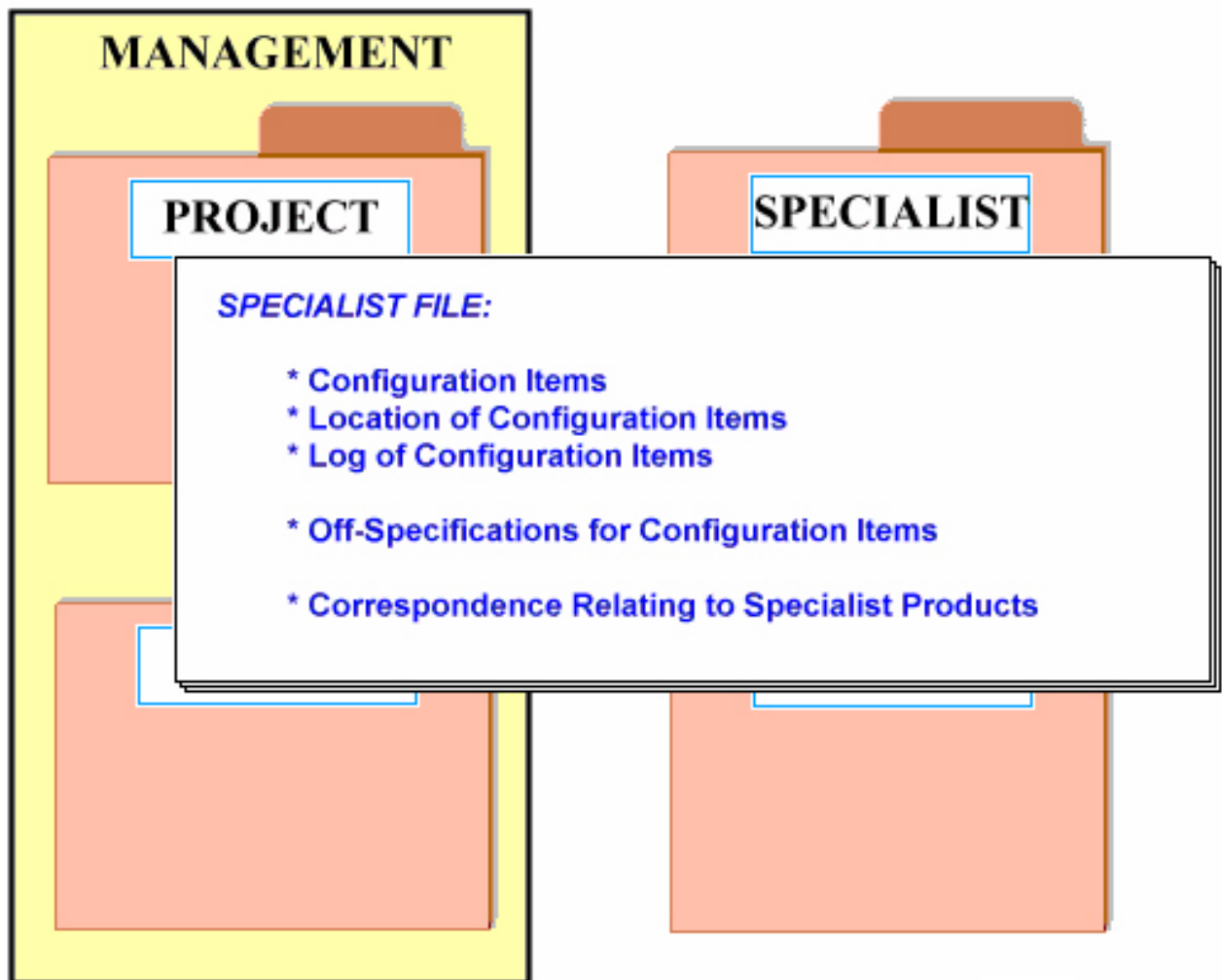
## Prince2 TECHNIQUES: Project Filing: Stage File

- The Stage File should ideally contain...



## Prince2 TECHNIQUES: Project Filing: Specialist File

- The Specialist File should ideally contain...



## Prince2 TECHNIQUES: Project Filing: Quality File

- The Quality File should ideally contain...

