

Project Management with PRINCE 2



PRINCE2 - **PR**ojects **IN** **C**ontrolled **E**nvironments

PRINCE2 is a project management methodology created in the early 1990s which was adopted by the British Government for all IT projects.

PRINCE2 is widely used in public and private sectors and has become the de facto standard for project management.



PRINCE2 - PRojects IN Controlled Environments

PRINCE2 is a project management method covering the organization, management and control of projects.

It provides a tailored and scalable method for the management of all types of projects. Each process is defined with it's own key inputs and outputs, together with the specific objectives and activities to be performed.



PRINCE2 - Projects IN Controlled Environments

PRINCE2 describes the project's manageable stages, which allows efficient control of resources and regular progress-monitoring throughout the project.

Project planning using PRINCE2 is product-based. This means project plans are aimed at delivering results (not just about planning when the various activities on the project will take place).



PRINCE2 - **PR**ojects **IN** **C**ontrolled **E**nvironments

Integral to PRINCE2 method is the business case.

The business case describes the organization's justification, commitment and rationale for the project's itself. The business case has to be reviewed on a regular basis to ensure the business objectives are still being met (especially important when these objectives can change over time).

Failure to deliver products that provide the benefits mapped out in the business case equates to a failed project.



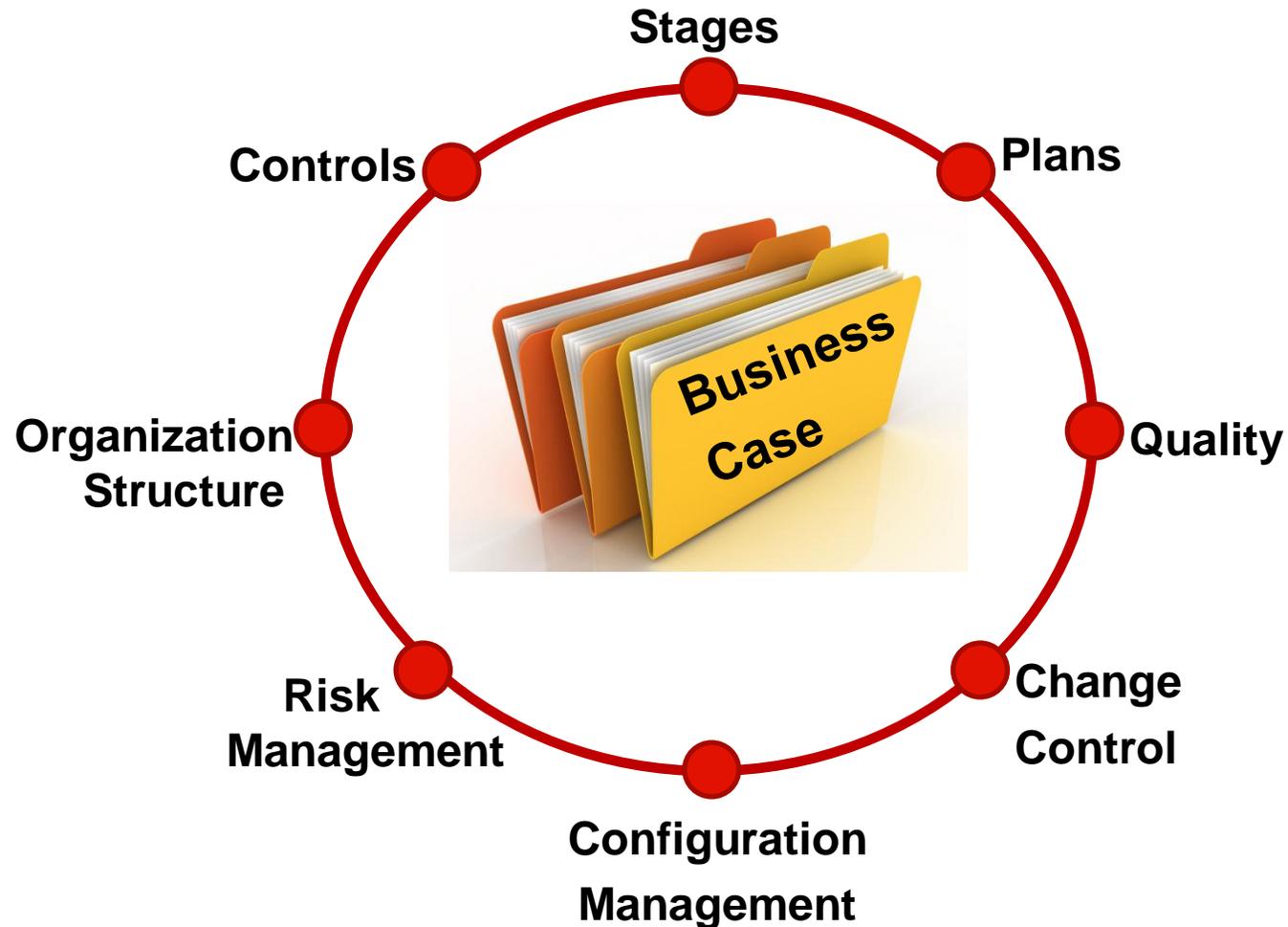
PRINCE2 - **PR**ojects **IN** **C**ontrolled **E**nvironments

The method (like the ITIL Framework for IT process management of infrastructure environments) provides a common language across all parties (including external third parties).

PRINCE2 can be used for a wide variety of projects.



PRINCE2 – Components



PRINCE2 – Components

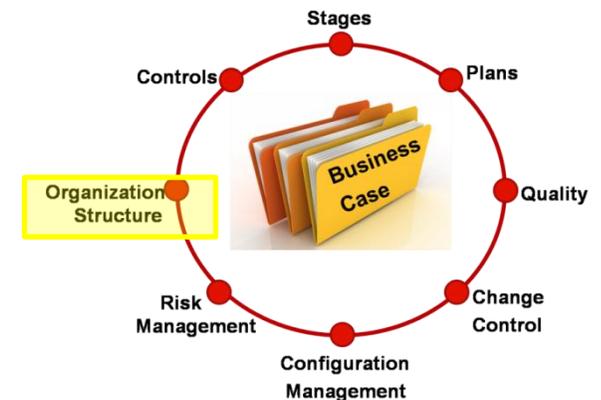
This next section will look at the eight defined components that comprise the PRINCE2 Framework.



PRINCE2 – Organizational Structure

An effective organizational structure for a project is vital. PRINCE2 defines the organization of a project by:

- ‘Supplier’ and ‘Customer’ concept – simple premise that the customer is the party that pays for the project. Note the supplier need not be an “external to the organization” party.



PRINCE2 - Organizational Structure cont...

- Project Management Team
- Project Board – represents (at management level) the business.
- Executive – ultimate accountability for the project, focus on return on investment.
- Senior User – represents the users and makes sure that the products to be delivered are clearly defined and fit for purpose when they are delivered.
- Senior Supplier – has a focus on delivering the requirements of the Senior User (within typical constraints).





PRINCE2 - Organizational Structure cont...

- Project Manager – day-to-day management of the project.
- Team Leader – an optional role, where teams of specialists are used on specific products/activities then the Project Manager may require a Single Point of Contact.
- Project Assurance – the Project Board need an assurance that the project is going according to the reports they will receive from the Project Manager.
- Project Support – optional, administrative support for the Project Manager.





PRINCE2 - Organizational Structure cont...

Four Layer Principle:

PRINCE2 claims that a project organization has four layers of activity:

1. Direction of the project (Project Management Team)
2. Day-to-day project management (Project Management Team)
3. Team Management (Project Management Team)
4. The actual work to create products (Team members).



PRINCE2 - Organizational Structure cont...

Program Organization – when a project is one of many projects.

- Program Director – overall responsibility for all projects. Will delegate authority for projects to a Project Board.
- Change Manager – Projects result in change to the way the organization operates. The Change Manager role is to author and guard the business case that results in a project. They become the coordinating force between the project deliverables and the implementation of the deliverables into the organization.



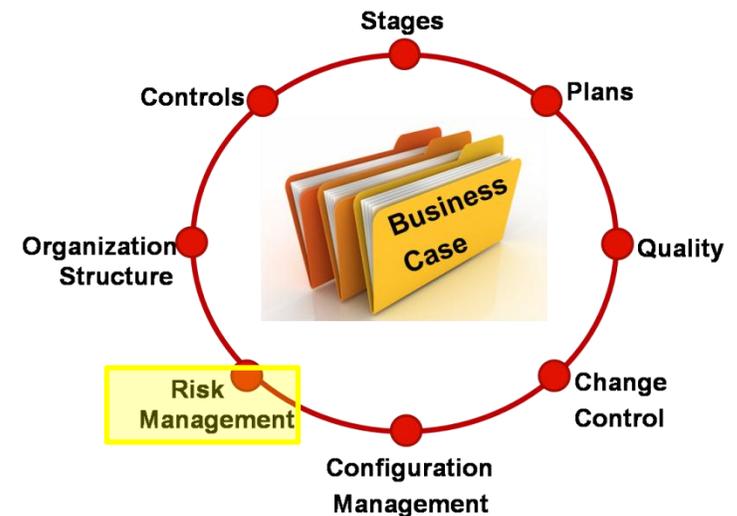
PRINCE2 - Organizational Structure cont...

- Design Authority – the project management policy, its procedures and information flows must be designed and improved. The Design Authority looks at policies to ensure compliance and will proactively look for improvements. They are responsible for ensuring that all projects follow the accepted path.
- Program Manager – The day-to-day management of the overall Program. They represent the Program Director and work closely with the Project Managers (to support them and ensure information is flowing). The Program Manager is also responds to project exceptions, slippages and changes in priority. It is a linking role between the Program organization and the projects themselves.

PRINCE2 – Risk Management

PRINCE2 defines risk as: *‘The chance of exposure to the adverse consequences of future events.’*

The key role of the Project Manager is the overall management of risk.



PRINCE2 – Risk Management cont...

Types of Risk include:

- Business Risk – “things” outside the project that threaten the ability of the project to deliver the products that will lead to the expected business benefits (e.g. validity of the business case, legislative changes, environmental issues, change in strategic direction).
- Project Risk – “things” inside the project that threaten the ability of the project to deliver the products that will lead to the expected business benefits (e.g. issues with suppliers, skills shortage, lack of project management expertise, personality clashes).



PRINCE2 – Risk Management cont...

The Project Board will advise the Project Manager of the business risks, and the Project Manager will advise the Project Board of project risks.

- Analysis – the identification, estimation (impact) and evaluation (likelihood). 5 strategies – Prevention, Reduction, Transference (assign the risk to a third party e.g. insurance), Contingency (action to take if the risk eventuates), Acceptance.



PRINCE2 – Risk Management cont...

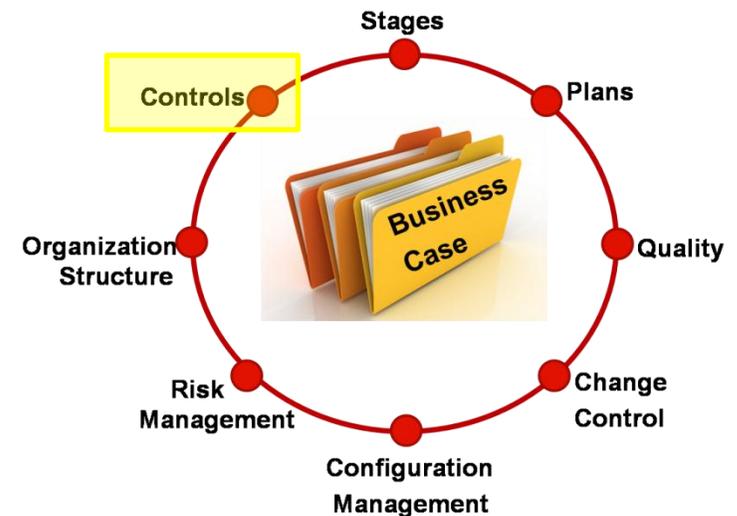
- Management
- Planning – what will be done if a risk eventuates.
- Resourcing – reflected in Stage Plans – who will do what, should a risk eventuate.
- Monitoring – measures to ensure that if risks eventuate, they can be recognized and invoke some action.
- Controlling – making sure that the pre-defined plan for a risk manifestation are followed.



PRINCE2 – Controls

Core to the study of Project Management is the requirement to make decisions. Quite simply, ‘controls’ allow decisions to be made.

In a project sense, controls ensure that progress is producing the required products, according to schedule and cost constraints, AND that the business case viability is still valid.



PRINCE2 – Controls cont...

There are three phases to PRINCE2 Controls:

- Controlled Start – links in with the ‘Starting up a Project (SP)’ and ‘Initiating a Project (IP)’ processes.
- Controlled Progress – ties in with reviews of progress against current stage plans and reflection of the Project Initiation Document (PID).
- Controlled Close – to ensure proper handover to Support and that reviews are completed, so lessons can be learned.



PRINCE2 – Controls cont...

There are five Major Control points:

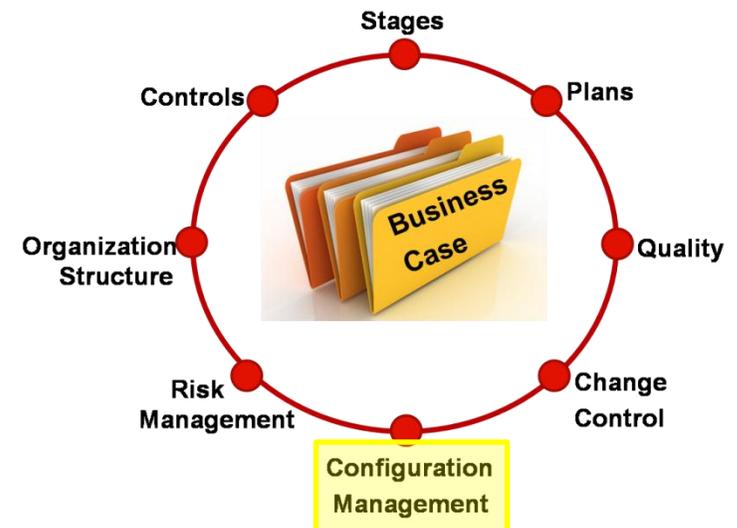
- Project Initiation and Project Close.
- Highlight Reports.
- End-Stage Assessment.
- Exception Reports.
- Mid-Stage Assessment.



PRINCE2 – Configuration Management

Central to effective Project Management is the delivery of products that will be used to realize benefits for the business. Configuration Management identifies, tracks and protects these products.

This is even more important in a Program, as inter-project product transfers could take place.



PRINCE2 – Configuration Management

“The five basic functions of Configuration Management are repeated as the activities for the Configuration Management process under ITIL (IT Infrastructure Library) – an IT infrastructure process improvement framework – also owned by the OGC”.

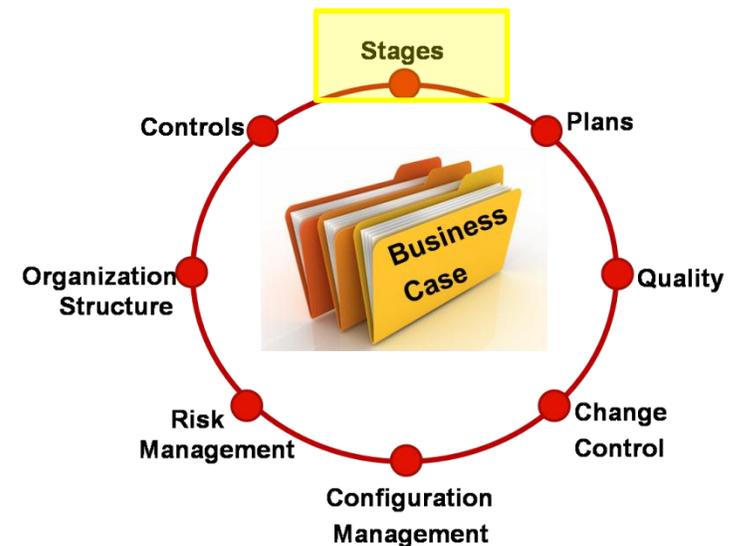
PRINCE2 – Configuration Management cont...

Configuration Management is **not optional** – the only flexibility is the degree of formality with which it is undertaken.

- *Planning* – what level will products be identified, who will identify, gather, update records, etc.
- *Identification* – actual product identification (can include actual labelling).
- *Control* – how do we “freeze” product configurations, who can make changes to products if approved?
- *Status accounting* – tracking the development of a product.
- *Verification* – auditing that the products we think we have (based on records) actually exist in reality.

PRINCE2 – Stages

Stages are a collection of activities and products whose delivery is managed as a single unit. Each project is broken into stages. The final number and size of each stage is dependent on the project.



PRINCE2 – Stages cont...

Use of stages will provide us with:

- Review and decision points – a set point for review/decision – not just an ad-hoc corridor conversation.
- Planning horizons – creates a shorter time focus. Project Plan covers the whole project and will need to be altered as circumstances alter. A stage plan is relatively short-term focus and will therefore be less prone to modification.
- Scalability – a project can be two to two hundred stages. The requirements of stage are the same throughout.



PRINCE2 – Stages cont...

- Management stages – e.g. resource allocation, reviews.
- Technical stages – based on product/s to be delivered as a result of the stage.
- Time focused – generally projects are broken into stages based on the Project plan timeframe.
- Consecutive – it is general practice that one stage must end, before the next stage can start.



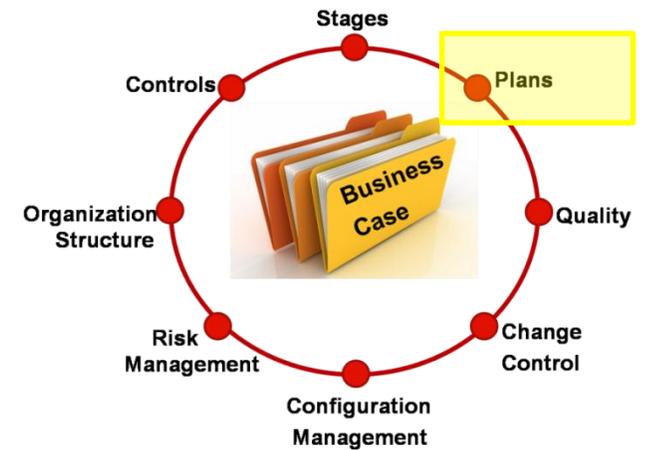
PRINCE2 – Plans

Planning is not trivial, and can deliver a host of benefits.

Primarily, planning gives us a way to approach the achievement of business requirements (customer requirements).

- **Plan Makeup**

The plan must specify what is to be achieved (products to be produced), activities required to deliver the products, required resources, time scales involved, activity dependence, potential risks, control and measurement points.



PRINCE2 – Plans cont...

- **Levels**

If appropriate the program plan will be the input for each Project Plan.

- Project Plan – overview of the entire project and is part of the Project Initiation Document (PID).
- Stage Plan – derived from the Project Plan a more detailed, but shorter time frame plan to achieve specific deliverables.
- Team Plan (optional) – take the stage plan and break it down for specialist members or teams.
- Exception Plan (can be applied to Project, Stage or Team) – when tolerances are exceeded and it should include the reason why the plan is required – if required the Exception Plan typically replaces a Stage Plan.

PRINCE2 – Plans cont...

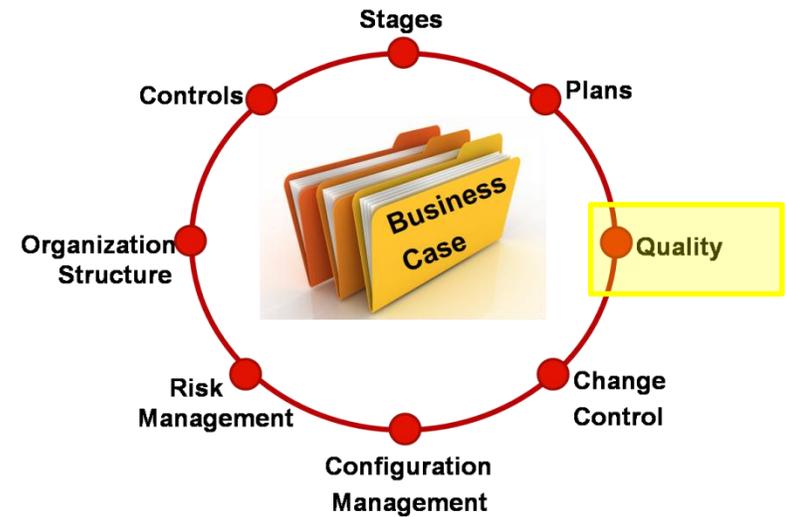
- **Approvals**

Consideration regarding who will approve various plans is important. This will be pre-defined, but a degree of common sense can also be applied here for example, Project Plan and perhaps Stage Plans approved by the Project Board, Team Plans approved by the Project Manager.



PRINCE2 – Quality

Quality is the concept that we use to discuss the suitability of a Product, for the purpose that it was designed or developed for. In a project environment we use quality to assess the suitability of products – but in regards to the context of the whole project, not just the part of the project that the product was created under.



PRINCE2 – Quality cont...

Quality Management should have four areas of focus, if we are to ensure that the expectations of the customer are met.

1. **Quality System:** Customer and supplier may have quality systems, that Prince2 and other frameworks (e.g. Cobit, ITIL) can be part of.
2. **Quality Assurance:** Establishing a quality system is an initiation step. To ensure actual quality and that the system is followed, we need to design an ongoing activity for monitoring, reporting, reviewing, improving.





PRINCE2 – Quality cont...

3. **Quality Planning:** Integrated into the Starting Up of a Project (SU) process; the way that the quality system will be used will be in the Project Initiation Document and therefore it will form part of each Stage Plan.
4. **Quality Control:** Checking the quality of products produced matches the quality expectations and was reached by utilizing the Quality system.



PRINCE2 – Quality cont...

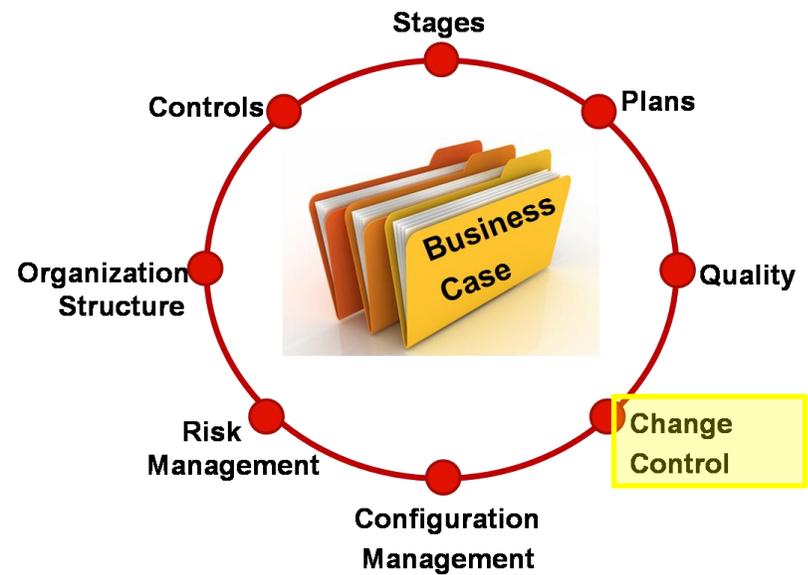
In addition:

- **Product descriptions** – quality reviews may result in a need to redefine products. If such a change is required, then Change Control must be involved.
- **Quality Reviews** – must be carried out at pre-determined intervals.
- **Link to ISO 9001** – ISO 9001 compliance is essentially that an organization will have a quality system in place. The overall organization Quality Management System, should include an element regarding the Quality of projects. This will then be reflected in the Project Quality Plan (which is typically integrated into the overall Project Plan).

PRINCE2 – Change Control

Everything changes! Yes, even our well controlled and expertly planned Project products and their requirements!

PRINCE2's focus on Change Control centres on any changes to products (i.e. the primary deliverable component of a stage).



PRINCE2 – Change Control cont...

- **Post acceptance change** – changes to completed products that have been accepted by the Project Board, **can not** be changed unless approved by the Project Board.
- **Authority Levels** – Who can authorize changes to products? How will changes be paid for? What role does the Program Management play in the change? Change responsibilities **should be** included in relevant job descriptions.
- **Integrity of Change** – A change to one product can have flow-on effects. **Changes can** be triggered from reviews of the Business case justification, from Risk Management activities, from organizational issues (strategic reviews, cost saving requirements, etc.)

PRINCE2 – Change Control cont...

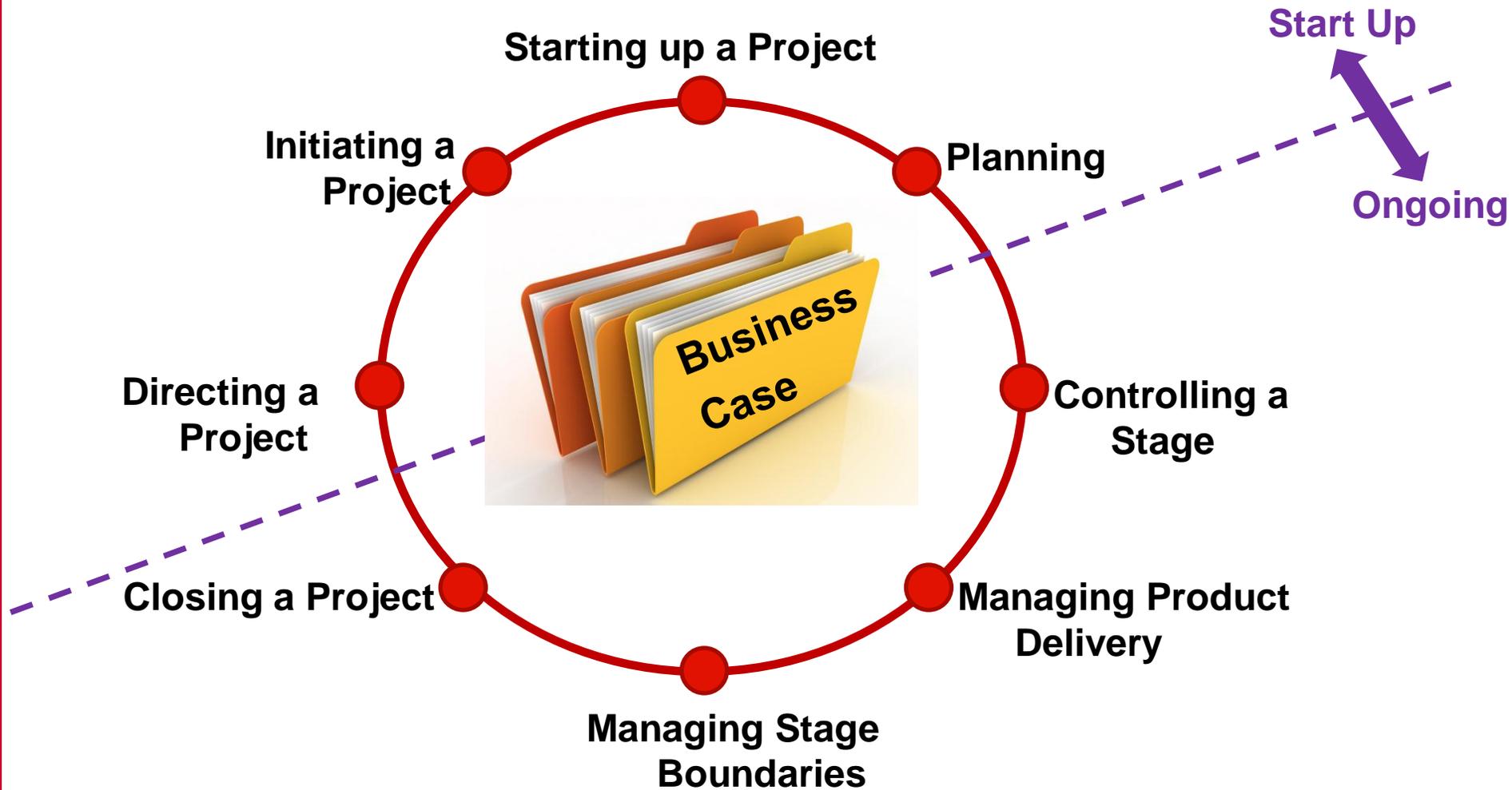
In PRINCE2, all project changes are managed as a formal Project Issue.

Control of change means assessment of:

- Impact of the potential change importance cost.
- Approved changes must be reflected in project documentation.



PRINCE2 – Processes!



PRINCE2 – Processes!

This next section will look at the eight defined processes that comprise the PRINCE2 Framework.

- Some processes are labeled as “start up”, others as “ongoing”.
- The “Directing a Project” process is ongoing, but it is also more strategic in nature. It is considered to be the ‘first’ process, but is a continuum of activities that is required throughout the life of the project.

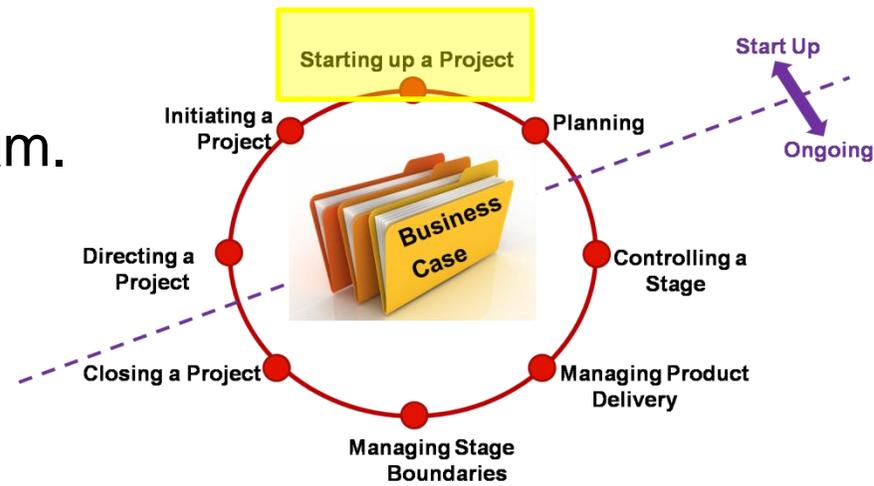


PRINCE2 – Processes – Starting Up!

Logically the second process defined by PRINCE2 is SU = Starting up a Project.

This process can be considered as ‘pre-project activities’ and has deliverables such as:

- Establish the Risk Log
- Project Brief
- Project Approach
- Initiation Stage Plan
- Appoint the Project Management Team.



PRINCE2 – Processes – Starting Up!

- Project Brief – done to ensure that the project is actually VIABLE and will deliver benefits.
- Project Approach – essentially how the project will be dealt with (e.g. purchase off the shelf, developed in house, outsourced).
- Initiation Stage Plan – IF the project is to proceed, then the preparation or INITIATION of the project will take time, effort, and resources. The Initiation Stage Plan outlines the expected time, effort, resources (and costs) of getting the project up and running.



PRINCE2 – Processes – Starting Up!

Part of this process involves establishing the **Project Management Team**.

These roles are related to a specific project:

- The Project Board
- Project Manager
- Team Leader
- Project Assurance
- Project Support.



PRINCE2 – Processes – Starting Up!

Many projects in an organization, require program management to ensure that all projects share similar processes.

This helps to maximize the efficiency of all processes, reduce duplication and share lessons learned.



PRINCE2 – Processes – Starting Up!

Part of this process involves establishing the **Program Organization Team**.

These roles are related to a specific program:

- Program Director
- Change Manager
- Design Authority
- Program Manager.



PRINCE2 – Processes – Starting Up!

Many projects in an organization, require program management to ensure that all projects share similar processes (helps to maximize the efficiency of all processes and reduce duplication and share lessons learned).



PRINCE2 – Processes – Starting Up!

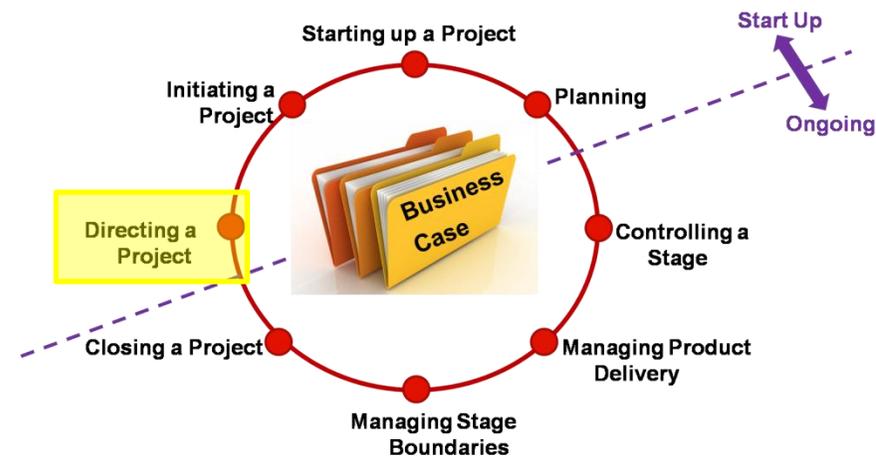
Essentially these roles influence all projects.

- **Director** – overall control, appoints Project Boards, secures resources, monitors progress, controls program management.
- **Change Manager** – responsible for all change activities and ensures all parties are aware of changes and how benefits will flow from the changes.
- **Design Authority** – to ensure that any procedures, systems or parts of a specific project will “mesh” in with the overall Program (easiest example is for reporting).
- **Program Manager** – day-to-day operational management of the program (supports Project Managers), deals with exceptions, slips in timeframes and setting priorities. Is the link between the Program organization and the Projects.

PRINCE2 – Processes – Directing A Project

This process (DP) is more of a continuum of activities that are required throughout the life of the project. It begins *after* the project Start Up (SU), and runs through until the completion of the Project (refer CP – Closing a Project).

The Board is not involved with the day-to-day management of the project.



PRINCE2 – Processes – Directing A Project

Project Board will:

- Authorize project initiation
- Authorize the project
- Authorize a stage/exception plan
- Liaise with Program Management
- Provide overall direction and management
- Confirm project closure.

The board will base its decision to authorize the project initiation, based on the Initiation Stage Plan, from the SU process.

PRINCE2 – Processes – Directing A Project

The actual project authorization comes from the Project Board. The decision is made in regard to the strength of the business case, balanced against the time, cost and other relevant organization strategies.





PRINCE2 – Processes – Directing A Project

The project should be broken into manageable pieces. Each piece should be approved. This forces a review by the board and allows the board to ensure that the business case is still valid, and makes known to the project team any organizational changes that may influence the project.

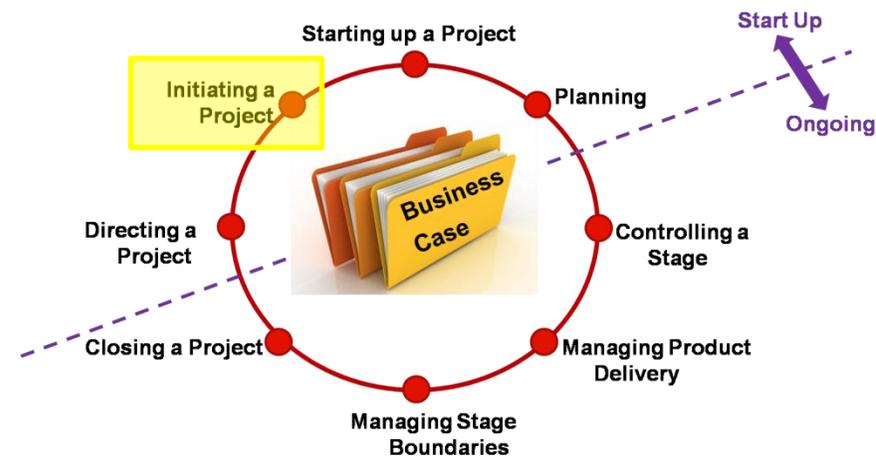
The project closure is the formal handover of the project to the support or production environment of the organization.



PRINCE2 – Processes – Initiating A Project

To date, the real work of the project has not begun.

The activities prior to this point have been focused on making sure that the project was not just a reaction to a temporary issue.



PRINCE2 – Processes – Initiating A Project

- **Planning Quality requirements** – review of the business case to ensure that WHAT is delivered matches the EXPECTATIONS of the customer.
- **Planning the Project** – this is establishing the control boundaries that will be used by the Project Board (timelines, events and costs).
- **Refining the Business Case & risks** – all too often in the excitement of beginning a new project we lose sight of WHY the work is being done. This activity makes sure that we revisit the WHY question and look for ways that the outcome of the project will be missed (risks).



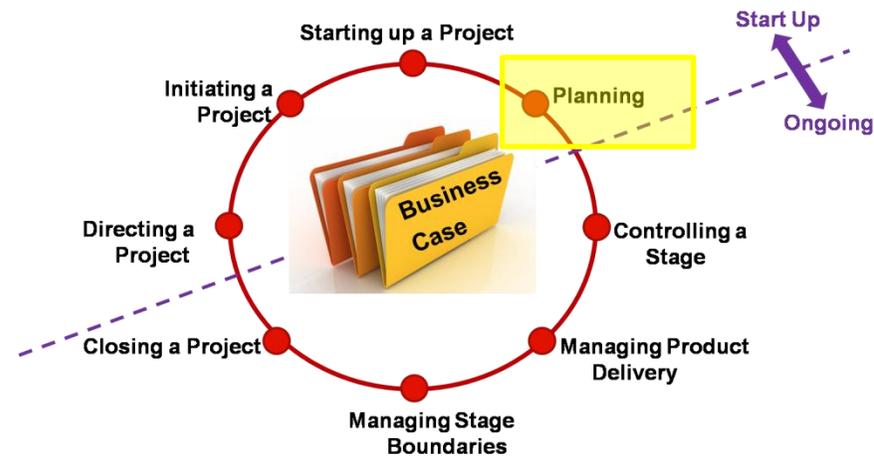
PRINCE2 – Processes – Initiating A Project

- **Establishing Project controls** – the task of actually making decisions so that the project can proceed at the expected pace has to be established. This activity ensures that the proper communication, controls and monitoring are in place.
- **Set up Project files** – a major challenge for any size project is the flow and control of information and documents. We need to have version control systems and ways to track information (note: the use of automated tools is crucial here and naturally this area is of specific interest to the program management organization).
- **Create the Project Initiation Document (PID)** – this can be thought of as the summary of the entire project. Reading this document should answer to a degree the How, What, When, Who, Where, Why questions.

PRINCE2 – Processes – Planning

Planning allows all involved parties to understand what is required, by who and when. The plan will describe certain events and resources required to deliver the requirements.

- **Designing a Plan** – careful consideration must be given to what is to be included in the plan. (Plan the plan!)
- **Product Definition + Analysis** – a crucial step is to be able to define what is to be delivered. Not soft benefits, but measurable products.



PRINCE2 – Processes – – Planning

- **Identify Activities and Dependencies** – once we've defined the actual products for delivery, we need to identify the activities required to achieve it and the relationships of activities to other product delivery activities (for workload balancing and to help avoid duplicated effort).
- **Estimating** – clearly mark estimates as estimates. Using past experience and records. Learn from previous projects to help hone the estimating skill.



PRINCE2 – Processes – Planning

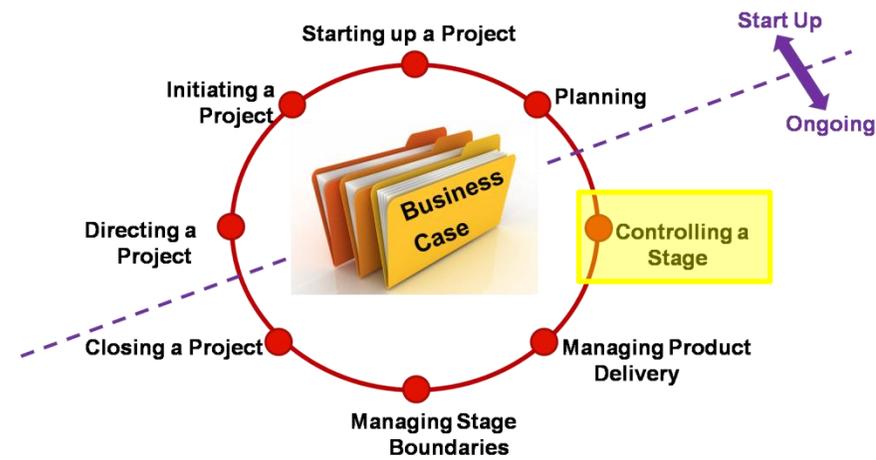
- **Scheduling** – perhaps the “traditional view” of the Project plan. Now we look at all the activities that are required and put them into a system so we can see when each activity will be performed.
- **Analysing Risks** – Risk analysis is an entire area of study. Suffice to say that improper consideration of risks will be the downfall of many – otherwise – valuable projects.
- **Completing a Plan** – The plan is more than a Gantt or Pert chart, or a spreadsheet of figures. It is the drawing together of all of the plan information and presenting it in a clear and unambiguous manner.



PRINCE2 – Processes – Controlling a Stage

Now that we have defined the “products” that are to be delivered, we need to ensure that we can actually deliver these products. Saying we can is one thing – actually doing it requires control disciplines.

It requires discipline to ensure that resources don’t get side tracked/distracted and it requires controls to ensure that the plan, along with its requisite budgets and time constraints are adhered to.



PRINCE2 – Processes – Controlling a Stage

- Work Package authorization – the trigger to begin a unit of work must come from the Project Manager.
- Assessing Progress – information flows about what is actually happening is compared to what was expected to happen.
- Capturing Project issues – things will go wrong and we must deal with these issues in a pre-defined and controlled manner.
- Examining Project issues – there are always many alternatives to dealing with a Project issue, we need to select the right (or “most right”) one by studying the alternatives.



PRINCE2 – Processes – Controlling a Stage

- Reviewing Stage Status – almost an enforced review to ensure that reviews are not treated as tiresome and mundane.
- Reporting Highlights – there is always good news to tell – the Project Board must be aware of the positives to ensure continued support and interest in the project.
- Taking Corrective Action – there must be a process to follow for ALL corrective actions – even if they appear minor. Many small actions quickly add up to major problems – so ALL corrective action needs to be taken in a controlled fashion.



PRINCE2 – Processes – Controlling a Stage

- Escalating Project Issues – when a Project issue goes beyond the boundaries of what the Project Manager can deal with (their tolerance limits), then the Project Board needs to be involved... BUT as a Project Manager, bring the issue AND bring alternative solutions.
- Receiving Completed Work Packages – work packages that are delivered (from the Managing Project Delivery Process) from individuals and/or teams are received back and then assessed to ensure that the work that was expected was actually done (and results (the status) reported to the Assessing Progress activity).

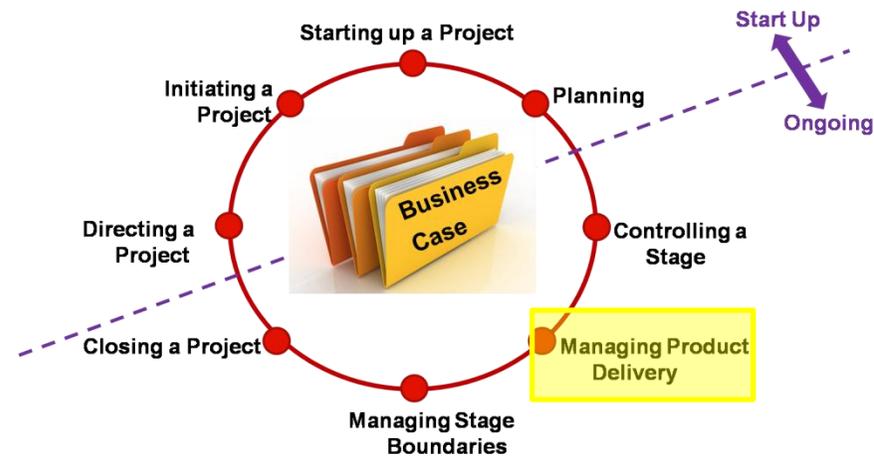


PRINCE2 – Processes – Managing Product Delivery

Someone has to do the work!

We refer to the “someone” as third party Suppliers.

We should also not get trapped in thinking that third party suppliers are only those external to the actual business. The Project generally calls upon internal staff to perform specific activities for the project – these staff then also become “third party suppliers”.



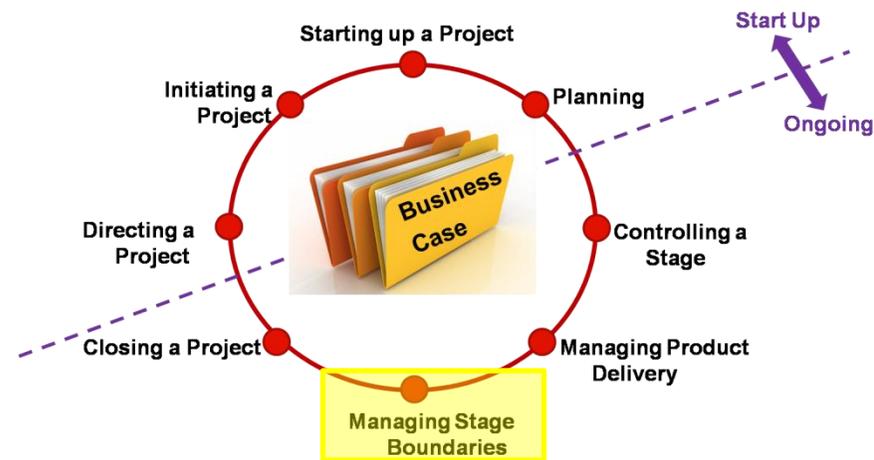
PRINCE2 – Processes – Managing Product Delivery

- **Accepting a Work Package** – negotiation AND agreement with the third party supplier about what is to be asked of them and what constraints will apply (check for “reasonableness”).
- **Executing a Work Package** – remember the third parties may not be users of Prince2 or have any understanding of it. This should not affect their ability to perform the work that is asked of them. However, we do need to see that the work itself is managed and can be tracked/assessed.
- **Delivering a Work Package** – the end result of a work package is notification to the Project Manager that the work for that package has been completed. Prince2 is not about directing people how to work, it is simply a way to ensure that the work that is done is matched to the required product delivery.

PRINCE2 – Processes – Managing Stage Boundaries

The Managing Stage Boundaries (SB) process is all about building in the line breaks, so that we can check the project is still on track and heading in the right direction to deliver the benefits.

If it is not, then we can change direction or stop the project – without inflicting any more damage on the organization (principally cost).



PRINCE2 – Processes – Managing Stage Boundaries

Planning a Stage:

A project is split into several stages. As one stage nears its end, we must be getting ready for the next stage – to ensure smooth continuity of product delivery. The next stage plan is derived from the overall Project Plan (prepared as part of the Planning (PL) process). The stage plan looks for Project Board support and ensures sufficient detail for day-to-day control purposes.



PRINCE2 – Processes – Managing Stage Boundaries

Updating a Project Plan:

We have discussed the changes of a project. As stages end and next stages begin, as issues arise and expectations are altered; all of this means that the Project Plan must be updated with new information.

Updating a Project Business Case:

A critical consideration is to NOT lose sight of the fact that the Project is to deliver benefits that will be explained in the business case.

Therefore, as the business changes, so to will the business case for the project.



PRINCE2 – Processes – Managing Stage Boundaries

Updating the Risk Log:

Keeping an up to date Risk Log means that we are looking for potential and real ways that the project could be damaged. A single review of risks at the start of the project is simply not enough. It is a continual requirement.

Reporting Stage End:

The people who approved the stage need to know when it's finished. The Project Board (and Program Management if applicable). Also any key stakeholders should be made aware of a stage end (e.g. Team Manager of third party suppliers).

PRINCE2 – Processes – Managing Stage Boundaries

Producing an Exception Plan:

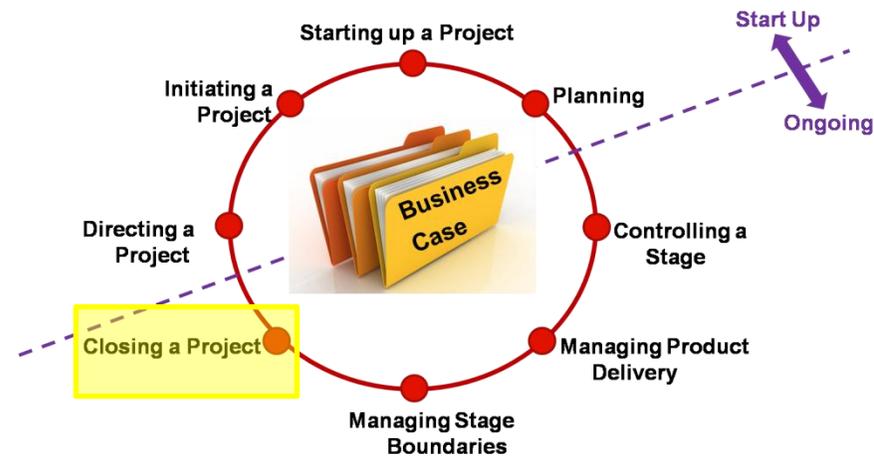
Exception is a departure or deviation beyond tolerance ranges. That is, minor deviations can be dealt with by the Project Manager directly (cross refer to Taking Corrective Action from Controlling a Stage process), however once pre-defined boundaries are crossed then the Project Board has to be involved.



PRINCE2 – Processes – Closing a Project

By definition a project has to end.

A clear end to a project will prevent spiralling costs and a perpetual merry-go-round effect. There can still be some incomplete activities at the end of a project – provided they are noted.



PRINCE2 – Processes – Closing a Project

De-commissioning a Project:

Involves customer and supplier agreeing that the project delivered what was expected. Also advise suppliers of impending closure so that they can start to plan resource movements and compilation of all records for potential future audits or estimation exercises.



PRINCE2 – Processes – Closing a Project

Identifying Follow on Actions:

Unfinished activities can be noted and assigned to operational Management.

Project Evaluation Review:

The opportunity to capture the learning from the project, so that our next project can derive benefits.



PRINCE2 – Summary

- PRINCE2 is a structured Project Management methodology applicable to all types of projects.
- PRINCE2 comprises of 8 processes and 8 supporting components.

