Choosing a Project Management Methodology

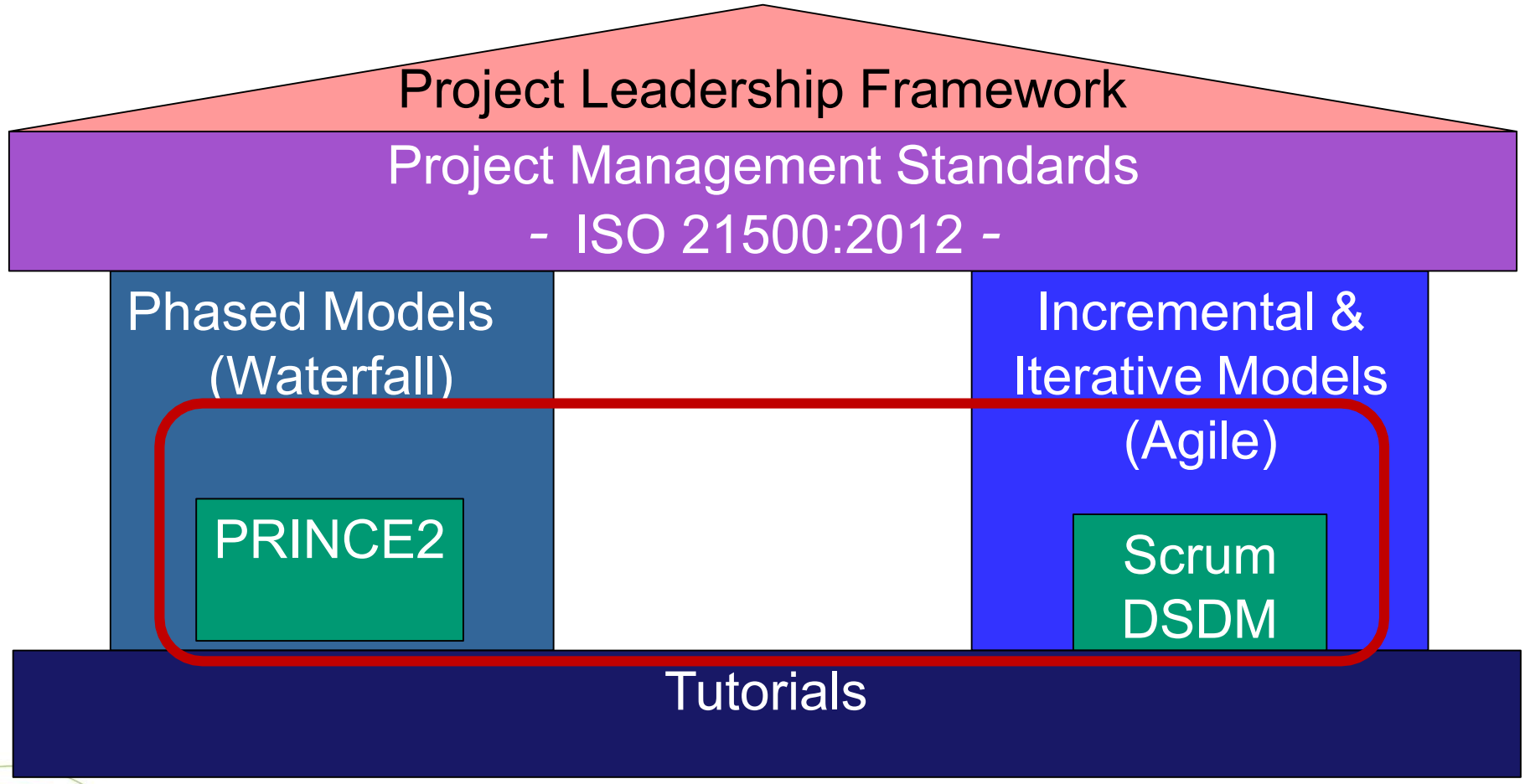
PRINCE2 Introduction

Timebox 8 of 13

Topics for this week

1) **Project management method selection**
2) PRINCE2 Overview
3) Risk Management

Unit Themes


Project Leadership Framework
Project Management Standards
- ISO 21500:2012 -
Phased Models (Waterfall)
PRINCE2
Incremental & Iterative Models (Agile)
Scrum
DSDM
Tutorials

Key Practices – Method Selection

Project management methodologies are like blueprints, showing your team how to build a successful project step by step.

Key Practices – Method Selection

But how do you choose the right methodology for your project and team?

http://clipart-library.com/clipart/548407.htm

Key Practices – Method Selection

Step 1: Start with the end in mind

Look at your requirements.

What does your final deliverable need to look like?

What benefits should it provide?

Key Practices – Method Selection

Step 2: What's already working?

Look at the processes you already have in place.

What kind of work environment does your team excel in?

Do they thrive on collaboration, incorporating new ideas as they work?

Or do they prefer an orderly, structured plan?

Key Practices – Method Selection

Step 3: Research methodologies

Which one best supports your project's goals and your team's strengths?

Choose a methodology that complements your project constraints, timeline, tools, and people.

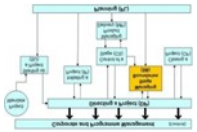
Key Practices – Method Selection

Methodologies

Traditional or Structured

- Waterfall Model

- PRINCE2



- PRiSM

- CMMI /ISO – Model based

- Spiral – Waterfall with prototyping

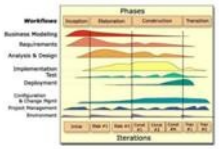
Key Practices – Method Selection

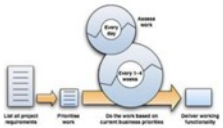
Methodologies

Iterative or Agile

- Agile 
- Scrum 
- DSDM 
- Extreme (XP) 

- Event Chain 

- Rational Unified Process (RUP) 

- Crystal 

Key Practices – Method Selection

Agile vs. Waterfall

Should teams abandon Waterfall in favour of an Agile approach?

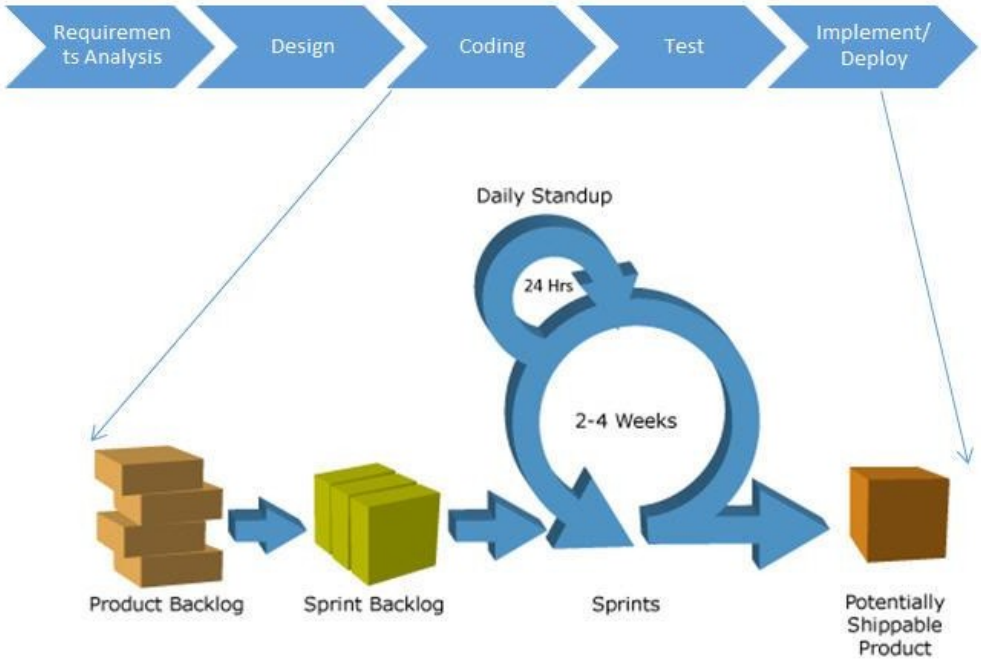
The truth is, there is no “one-size-fits-all” approach. Waterfall and Agile each have their advantages.

Key Practices – Method Selection

Agile-Waterfall hybrid

Teams have been known to combine the best of both methodology worlds: the dynamic, responsiveness of Agile with the deliberate predictability of Waterfall.

While this approach can have its challenges, the right work management strategy can accommodate Waterfall and Agile.



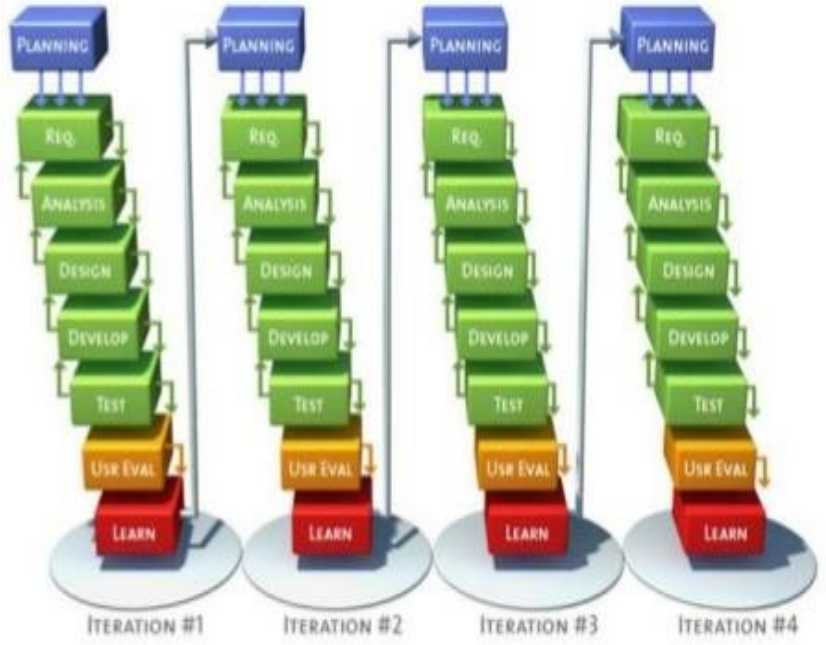
Collaborative (Hybrid) Model

Key Practices – Method Selection

Selecting Agile or Waterfall

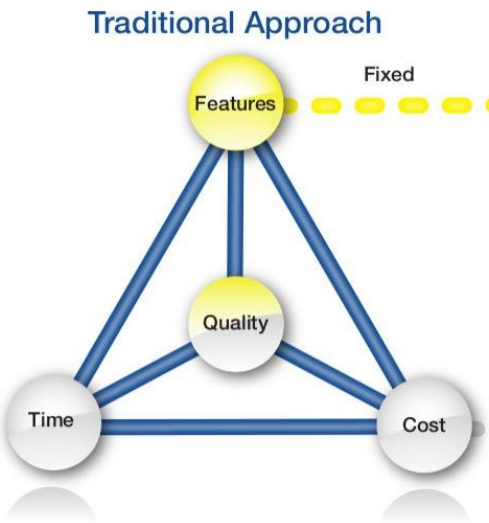
Waterfall (planning first)

Agile (iterative and incremental)



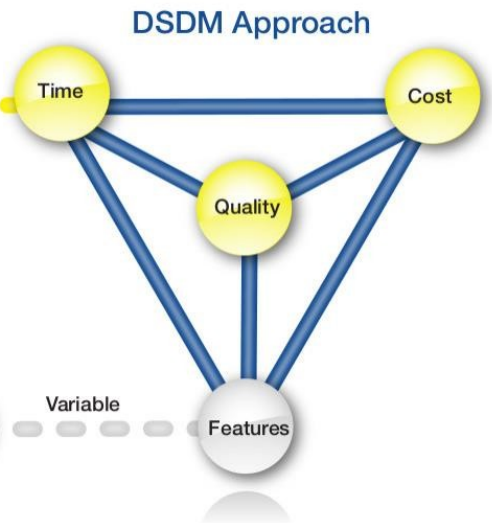
Selecting Agile or Waterfall

Waterfall



Fix: Features
using Scope Control

DSDM / Agile



Fix: Time
using Timeboxes

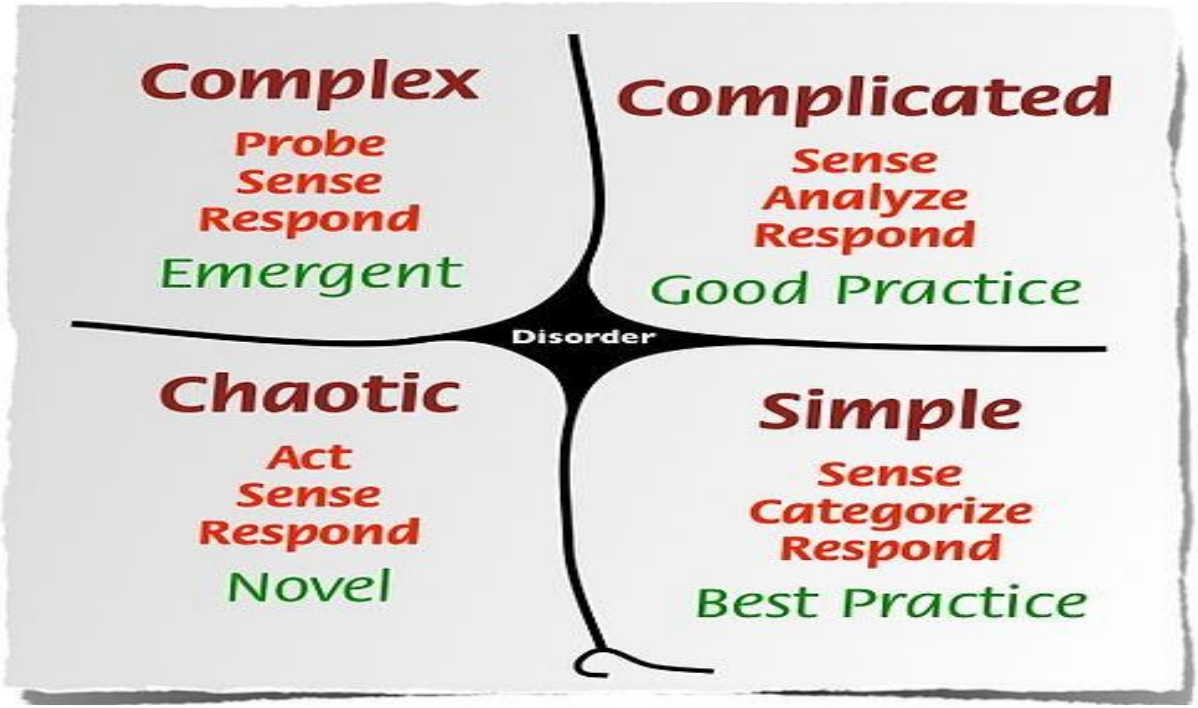
Selecting Agile or Waterfall

Metric	Waterfall	Agile
Planning scale	Long-term	Short-term
Distance between customer and developer	Long	Short
Time between specification and implementation	Long	Short
Time to discover problems	Long	Short
Project schedule risk	High	Low
Ability to respond quickly to change	Low	High

Source: www.venveo.com/blog/agile-vs-waterfall-project-management

Selecting Agile or Waterfall

Cynefin (ku-nev-in), is a Welsh word that signifies the multiple factors in our environment and our experience that influence us in ways we can never understand.



Source: Wikipedia

Selecting Agile or Waterfall

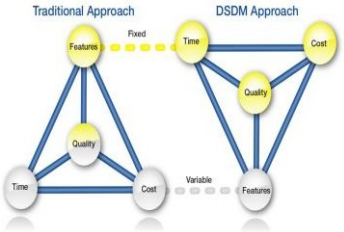
Cynefin Domain	Cause & Effect	Risk Type	Cost of Change	PM Approach	Examples
1. Simple	Obvious	Known-known	Very High	Standard Operating Procedures	Postal services
2. Complicated	Requires analysis	Known-unknown	High	Waterfall	Civil engineering
3. Complex	Perceived in retrospect	Unknown-unknown	Low	Agile	Software development & IS development
4. Chaotic	None	Unknown-known	Very low	Novel	Fire rescue services

Selecting Agile or Waterfall

	DSDM	MSP & PRINCE2	Scrum	XP
Program / Portfolio Management				
Project Delivery				
Product Delivery				
Product Engineering				

Selecting Agile or Waterfall

- Consider the variables
  - Is there flexibility in depth and detail of features?
- Think about the people
  - Are all roles capable of, and committed to the project approach
- Consider the Principles
  - Will the organisation support this way of working?
- This is rarely a black and white (clear) decision
  - There is a tool to help decide



Selecting Agile or Waterfall

Project Approach Questionnaire (PAQ)

Project:		Name:
Date:		Position:

		Indicate the closest collective opinon					Where appropriate, comment on issues or risks related to a more negative response to this aspect of the DSDM approach
Ref	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
1	All members of the project understand and accept the DSDM approach (Philosophy, Principles and Practices)						
2	The Business Sponsor and the Business Visionary demonstrate clear and proactive ownership of the project.						
3	The business vision driving the project is clearly stated and understood by all members of the project team						
4	All project participants understand and accept that on-time delivery of an acceptable solution is the primary measure of success for the project						
5	The requirements can be prioritised and there is confidence that cost and time commitments can be met by flexing the scope of what's delivered.						
6	All members of the project team accept that requirements should only be defined at a high level in the early phases of the project and that detail will emerge as development progresses.						
7	All members of the project team accept that change in requirements is inevitable and that it is only by embracing change that the right solution will be delivered.						

PAQ available online at the DSDM website.

Selecting Agile or Waterfall

WATERFALL

Project Management Behaviours

Prepare detailed staffing plan

Negotiate for part-time specialists

Command & control individuals

Conduct individual performance reviews

Team Behaviours

Take direction

Seek individual reward Focus on low-level objectives

Compete

Comply with processes

Avoid conflicts

- **AGILE**
- **Project Management Behaviours**

1. Gather cross-functional team
2. Negotiate for full-time generalists
3. Facilitate teams and remove impediments
4. Conduct team retrospectives

- **Team Behaviours**

1. Take initiative
2. Focus on team contributions
3. Concentrate on solutions
4. Collaborate
5. Continuously improve
6. Navigate conflicts

Key Practices – Method Selection

The Best Methodology

- No one-size-fits-all
- May require a hybrid approach.
- Develop a methodology assessment process (MAP) like PAQ
- May require reassessment and modifications as business factors change.

Topics for this week

1) Project management method selection

2) PRINCE2 Overview

3) Risk Management

PRINCE2

Topics

- What is PRINCE2?
- Principles
- Themes
- Processes

PRINCE2

What is PRINCE2?

PRINCE2® (PRojects IN Controlled Environments) is a process-based approach for project management providing an easily tailored and scalable method for the management of all types of projects.

The method is the de-facto standard for project management in the UK and is practiced worldwide.

PRINCE2

Principles

1. Continued business justification
2. Learn from experience
3. Defined roles and responsibilities
4. Manage by stages
5. Manage by exception
6. Focus on products
7. Tailor to suit the project environment

PRINCE2

Themes

Where are we going?

Where are we now?

Should we continue?

Why?

What?

What is the impact?

What if?

How?

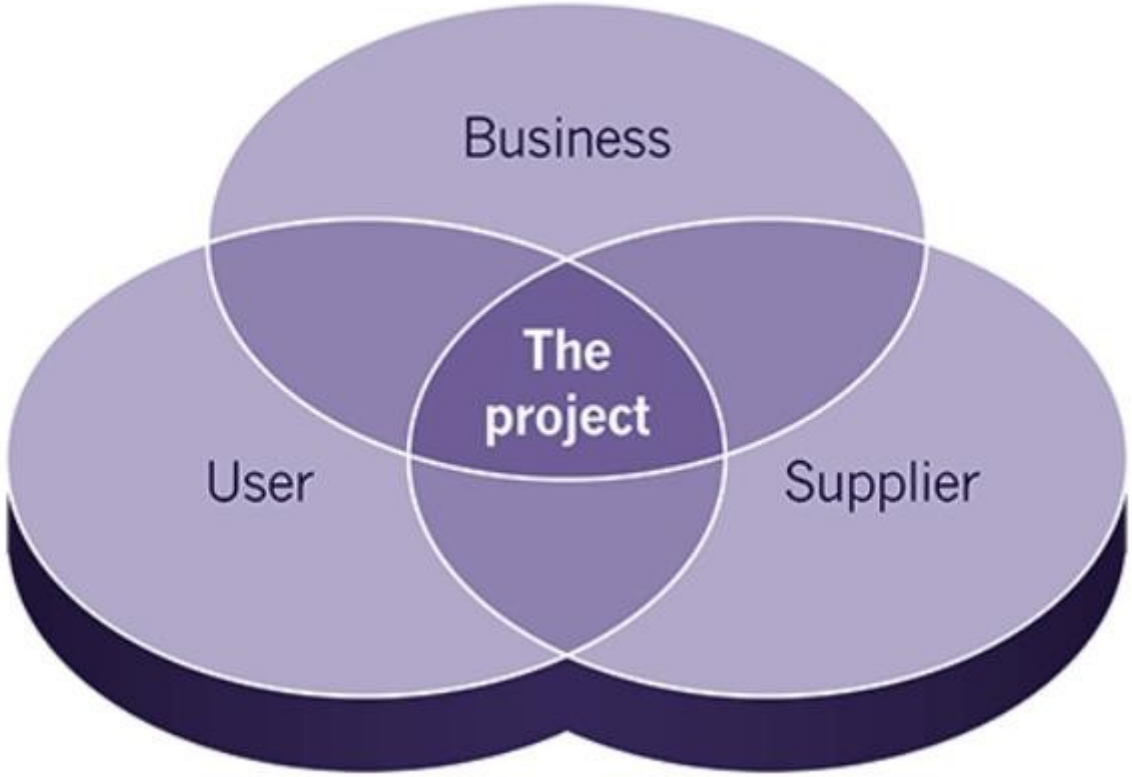
How Much?

When?

PRINCE2

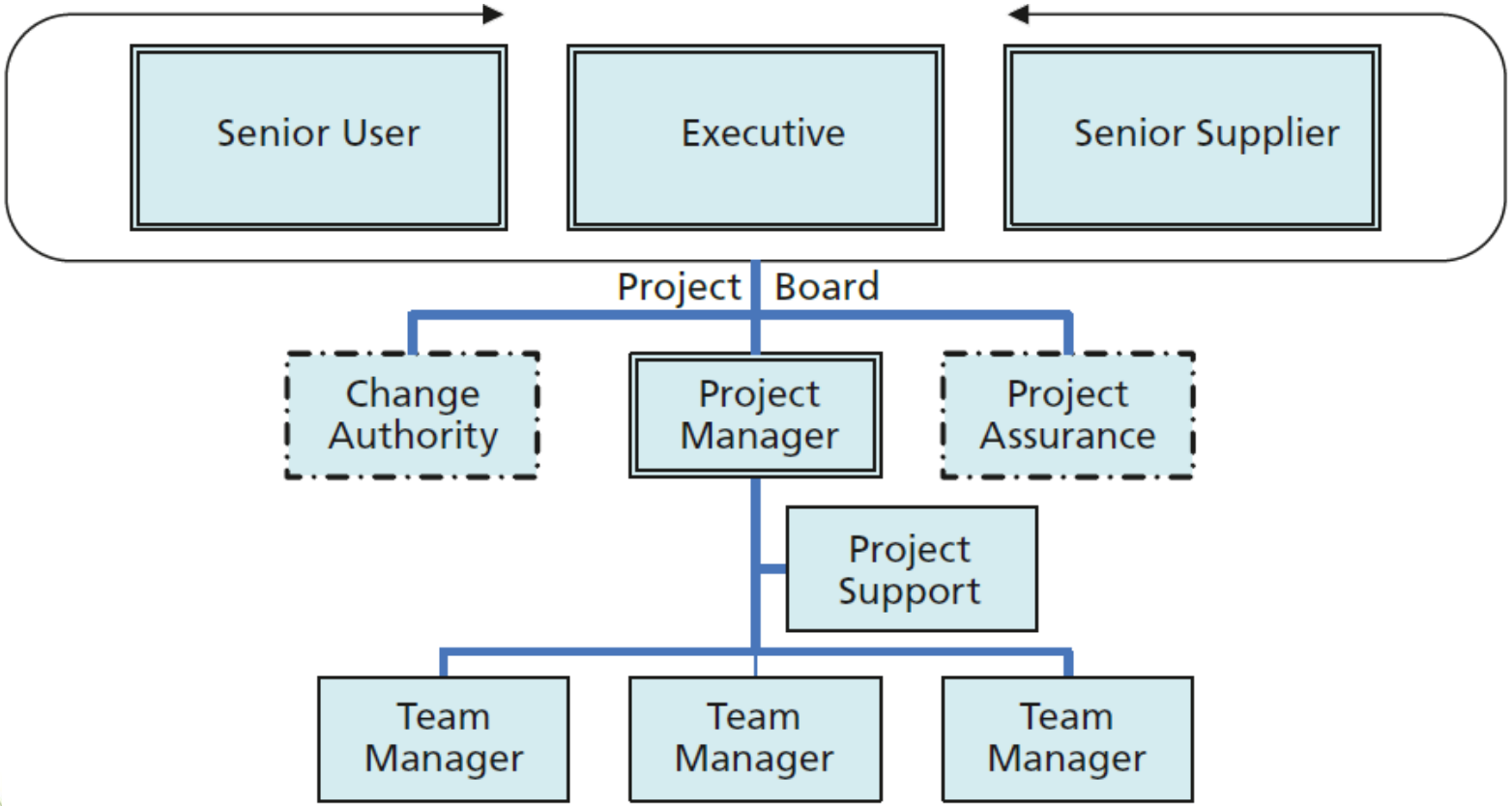
Organisation

Three (3) Principal Project Interests



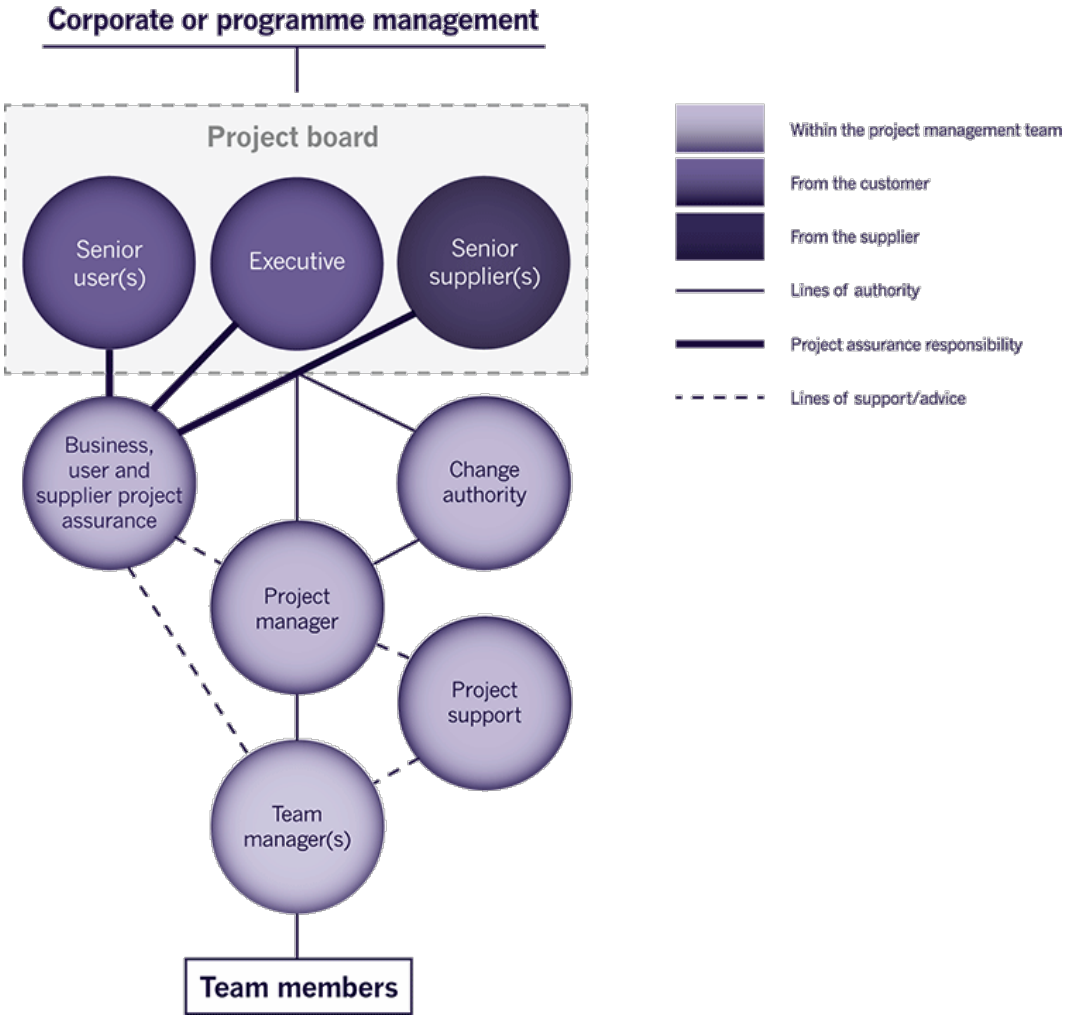
PRINCE2

Organisation



PRINCE2

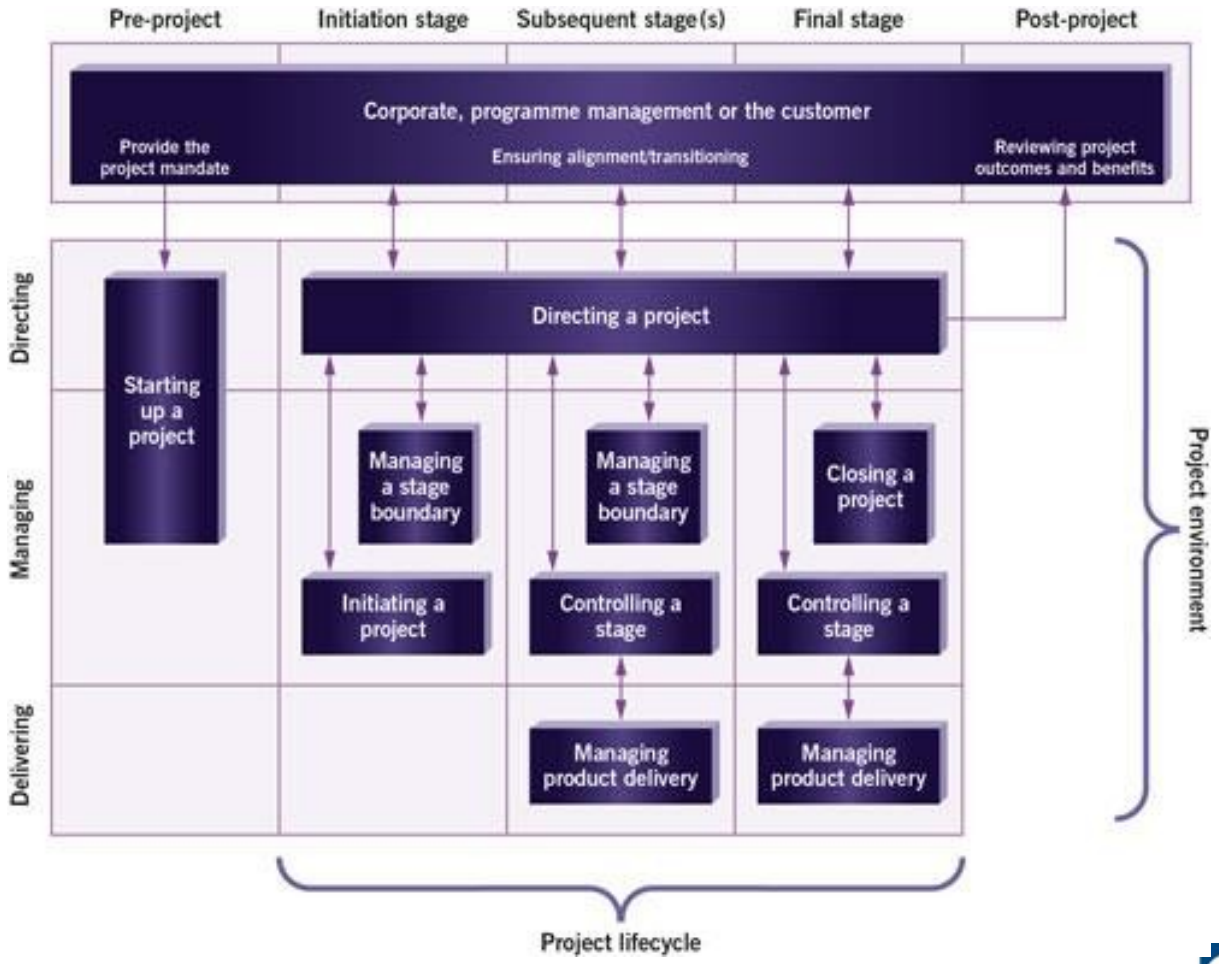
Project Assurance



PRINCE2

Processes

1. Starting up a project
2. Directing a project
3. Initiating a project
4. Controlling a stage
5. Managing product delivery
6. Managing stage boundaries
7. Closing a project



Processes - Starting up a project

A quality start up process lays the foundation for a successful project.

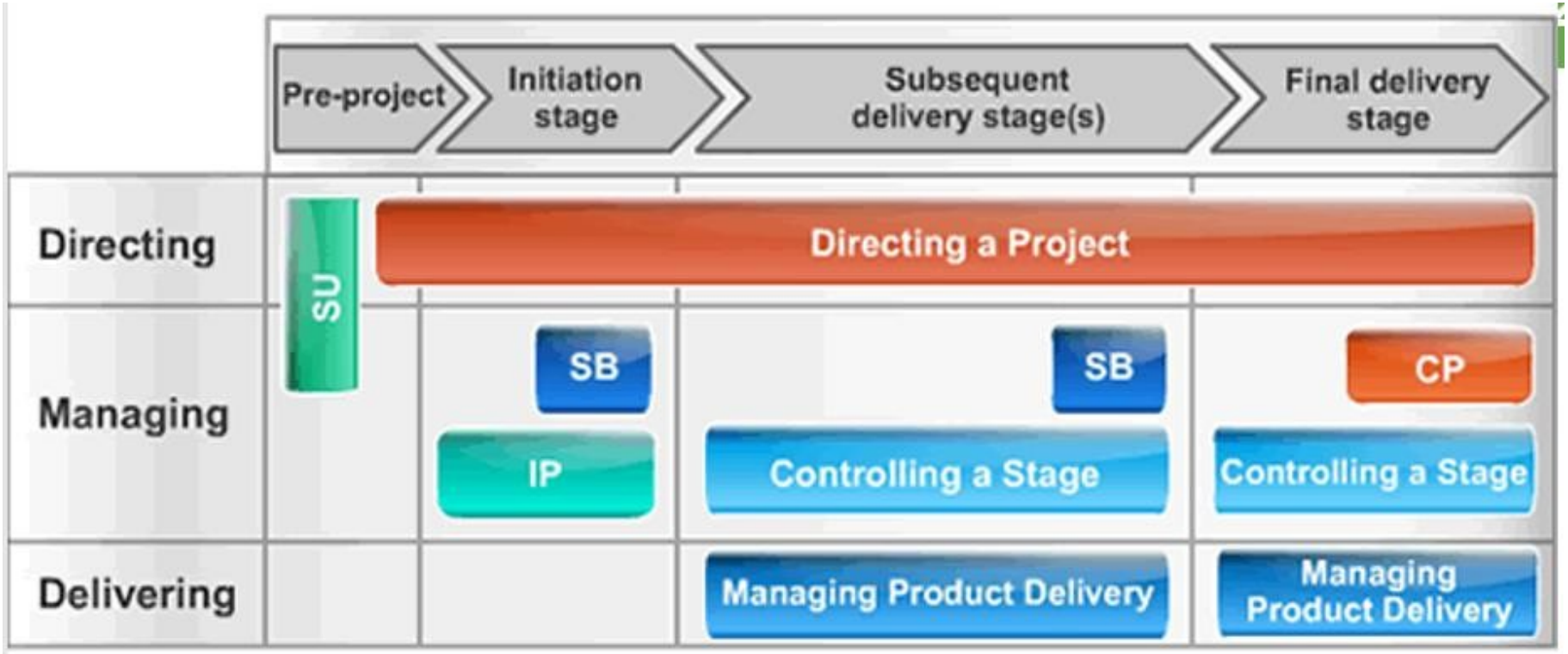
Starts with a PRINCE2 Project Brief

- Reviewed and approved by the Project Board.
- In the Initiating a Project process, the Project Brief is extended, refined and turned into a Project Initiation Document (PID).
- May take many forms but generally includes:
  - Project Definition (Background, objectives etc.)
  - Outline Business Case. (Reasons why the project is needed.)
  - Project Product Description. (Description of the end deliverable).
  - Project Approach. (Defining the choice of solution.)
  - Project Management Team Structure.
  - Role Descriptions.

- Should accurately reflect the project mandate and the requirements of the business and users – *but keep it brief*!

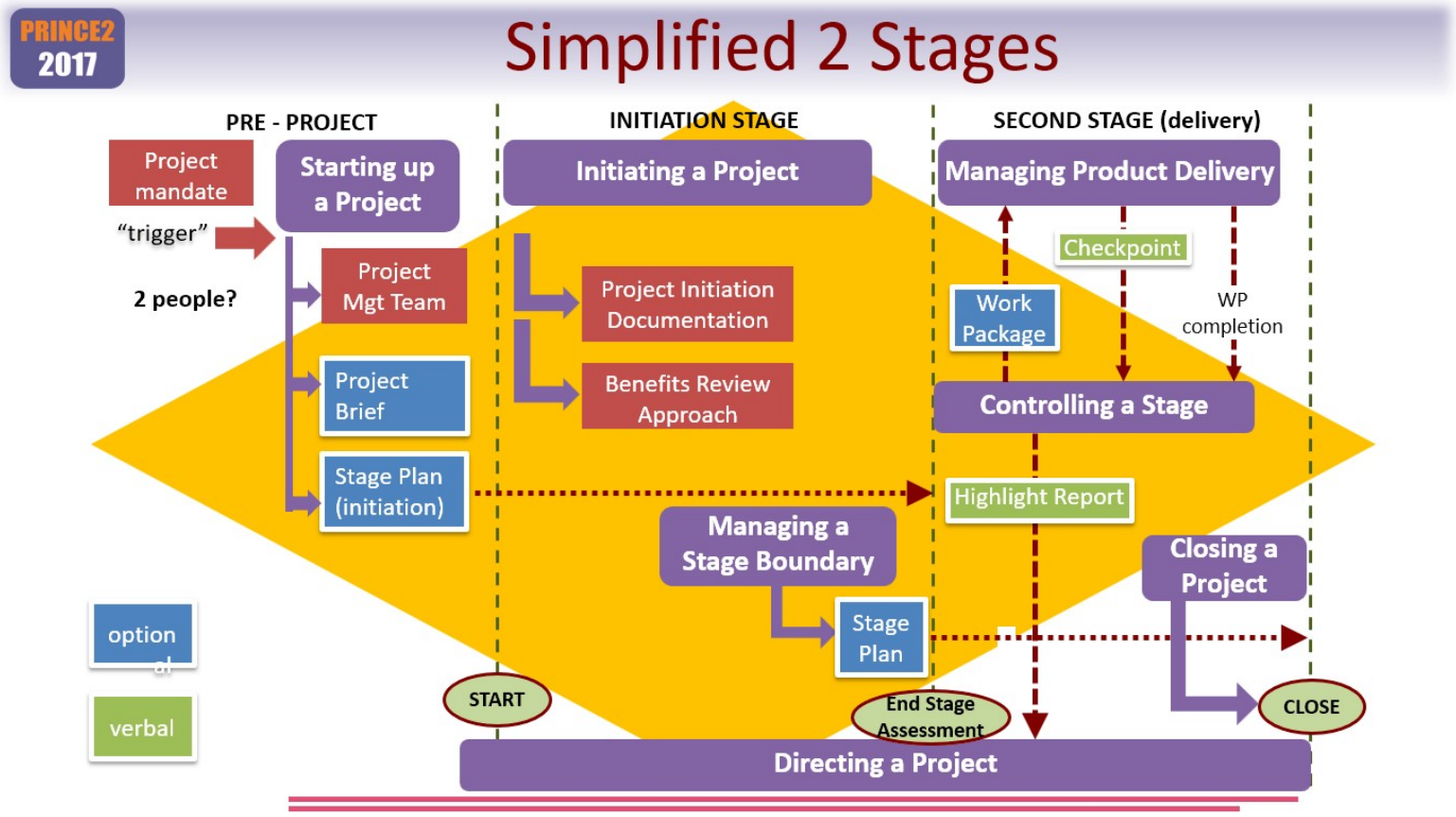
PRINCE2

Stages



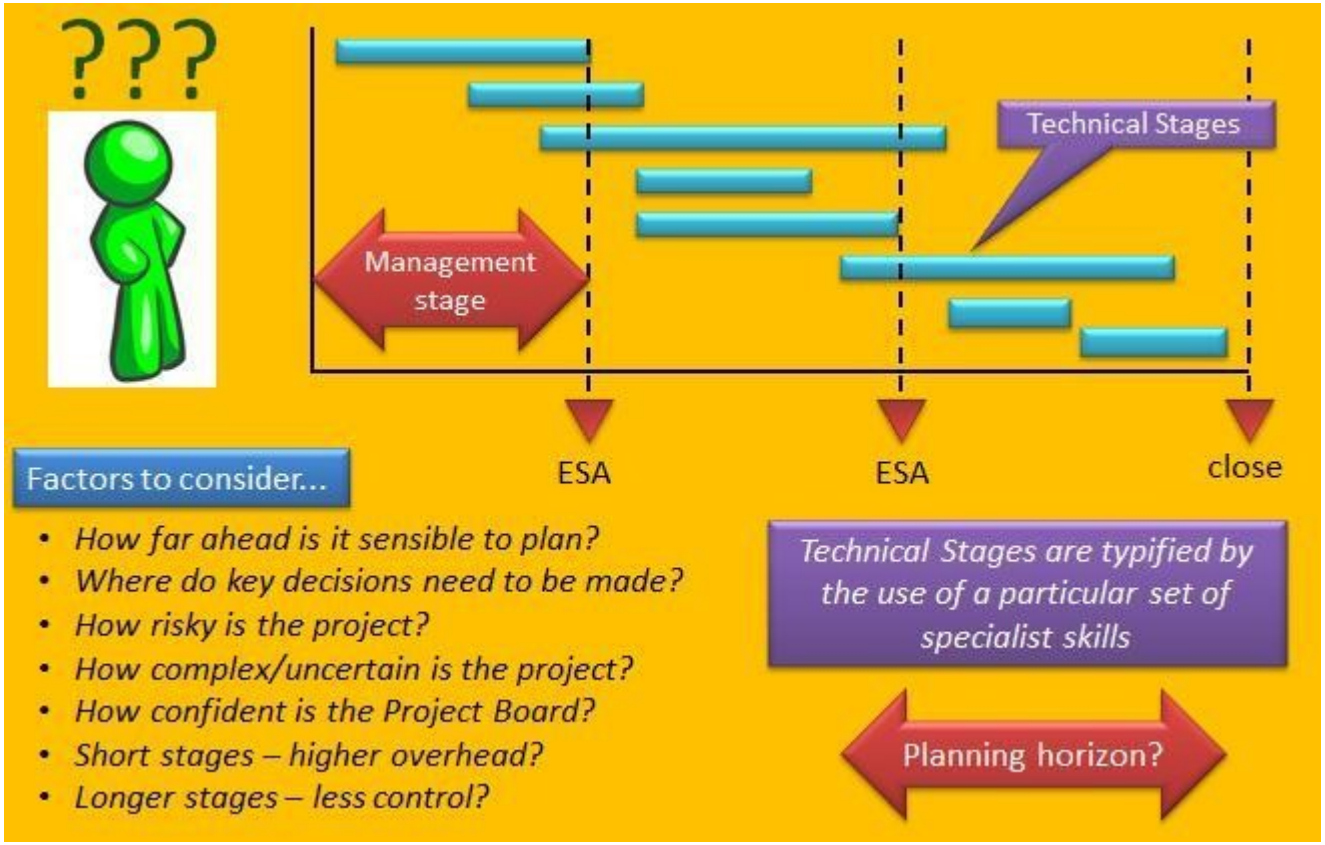
PRINCE2

Stages



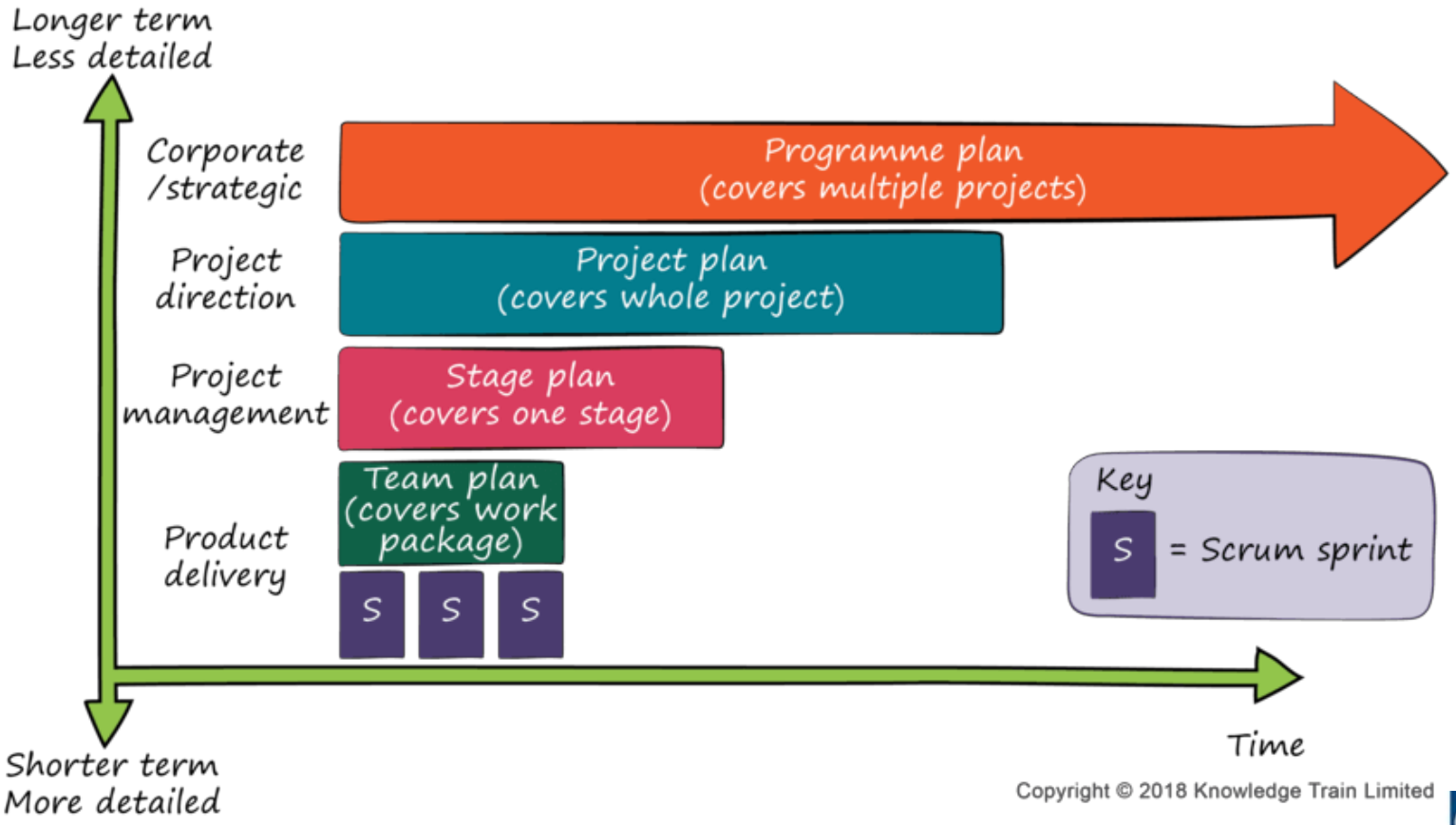
PRINCE2

Stages



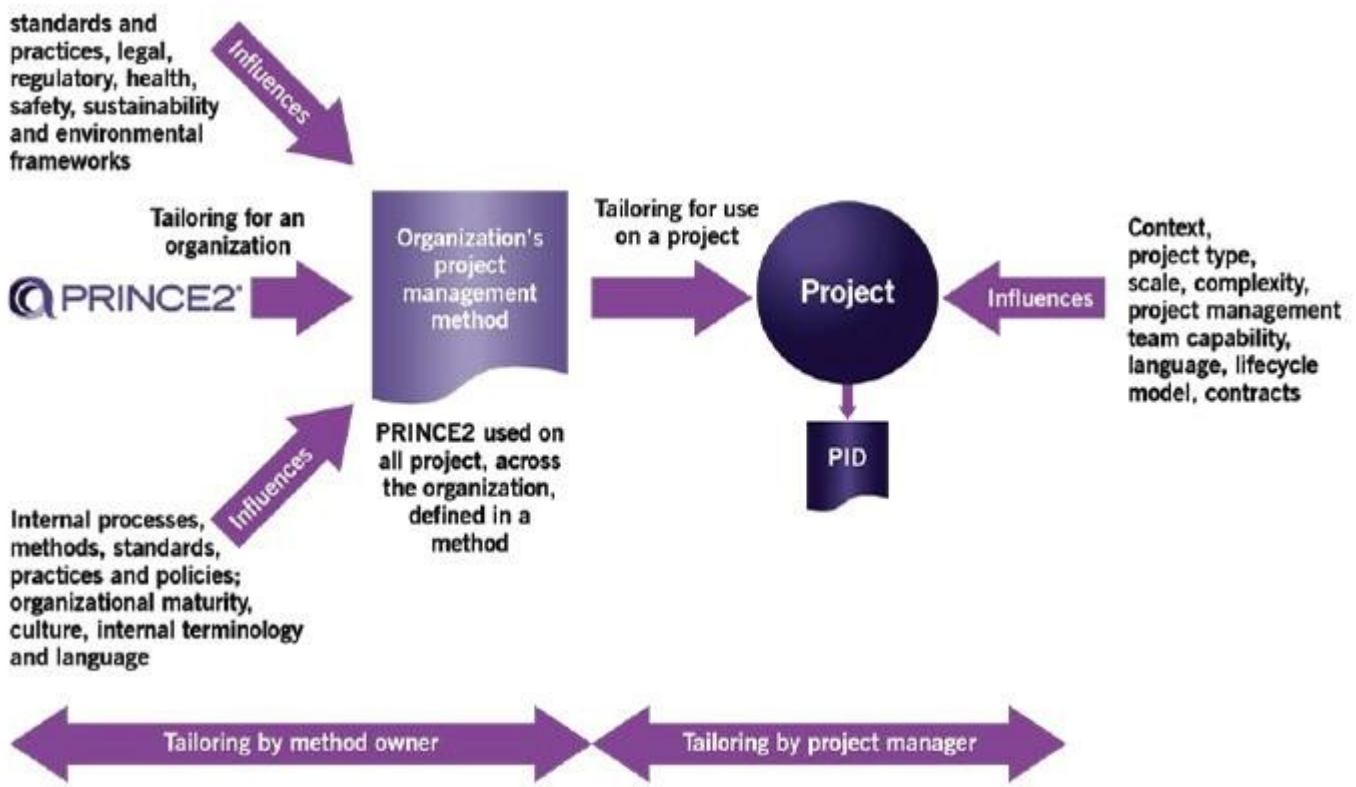
PRINCE2

Stages



PRINCE2

Tailoring to the Project Environment



Topics for this week

1) Project management method selection
2) PRINCE2 Overview
3) **Risk Management**

Risk Management

Risk Management - identifying, analysing, and responding to risk factors throughout the life of a project.

Project risk - any possible event that can positively or negatively affect the viability of a project or the project's objectives. Risk exists the moment a project is conceived.

Risk = (Probability of Event)×(Consequences of Event)

Probability: 0 (almost never) to 1 (almost surely), or 0% to 100%
Consequence: $ value

Risk Management

Objectives:

- **increase** the probability and **impact of positive** events.

  e.g. Items cost less than quoted, performance exceeds expectation adding further value

- **decrease** the probability and **impact of negative** events.

  e.g. Resource unavailable, skill shortage

Known risks - identified, analysed, possible to plan responses.
Unknown risks - cannot be managed proactively and therefore require the creation of contingency plans.

Risk tolerance - is the acceptable risks the stakeholders are willing to accept.

PRINCE2 - Risk Management

Risk Management procedure:

1. Identify (Event and Cause)
   - Record all related details in the Risk Register
2. Assess (Probability impact; Proximity)
   - Probability impact (to project objectives) - low, med, high
   - Proximity (likelihood or how soon) - low, med, high
2. Plan the response
   - Threat (Avoid; Reduce; Transfer; Fall back; Accept, Share)
   - Opportunity (Exploit, Enhance, Reject Share)
4. Implement the response
   - Risk Owner and Actionee
5. Communicate
   - Reports: Checkpoint, Highlight, End stage

Risk Management - Identify

Techniques to identify Risks;

- Brainstorming meetings
- Expert opinion
- Past history
- Multiple (or team based) assessments

Categories of Risk; (Q: Can you think of examples for each type?)

- Technology Risks
- People Risks
- Organisational Risks
- Requirements Risks
- Estimation Risks

Review (Take Aways) for this week

1) Method selection
   - ❖ No best approach
   - ❖ Agile – complex and flexible
   - ❖ PRINCE2 – strong governance and control

2) PRINCE2
   - ❖ Continual business justification
   - ❖ Defined roles and responsibilities
   - ❖ Manage by stages
   - ❖ Manage by exception
   - ❖ Focus on products
   - ❖ Tailor to suit the project environment

3) Risk Management
   - ❖ Reduce probability of negative impact
   - ❖ Procedure is – identify, assess, plan & implement response
   - ❖ Important that this is communicated

Risk Management - Identify

PRINCE2 uses a Risk Register to record each Risk;

- Risk Identifier - This is just a unique number.
- Risk Author - Person who raised the Risk.
- Date Registered - Date the Risk was registered.
- Risk Category - Project has its own categories e.g. quality, network and supplier.
- Risk Description - Written is a specific way (e.g. cause, event and effect).
- Probability Impact - Choose value from an agreed scale (very low, low, normal, etc.).
- Proximity - How soon (when) the risk is likely to happen.
- Risk Response Category -
  - Threat - avoid, reduce, fall back, transfer, accept or share.
  - Opportunity - enhance, exploit, reject or share.
- Risk Response - Actions to resolve the Risk.
- Risk Status - Current status of the Risk: Active or Closed.
- Risk Owner - One person responsible for managing the Risk.
- Risk Actionee - Person carry out the actions described in the response.

Preparation for next week

PRINCE2 Methods and Techniques

Read: PRINCE2 Methodology for free.
(http://www.projectinabox.org.uk/prince2-resource-pack/)

Read: How to Perform a Critical Path Analysis.
(https://www.projectengineer.net/how-to-perform-a-critical-path-analysis-2/)

Any questions?

Please attend the tutorial you enrolled in.

Thank you.
See you next week.