



CPES IN THE FUTURE

Course title: International Project
Management

Lecturer: Nodirjon Makhkamov



Purpose of Today

- Provide an overview of project management philosophies and how they can be applied to research projects.
- Outline the benefits of project management and the key to setting up successful.
- Provide an overview of key roles and responsibilities in the project management world.

*

WHAT IS A PROJECT?

What is a Project?

- “ A Project is a temporary organisation that is created for the purposes of delivering one or more business products according to an agreed business case”

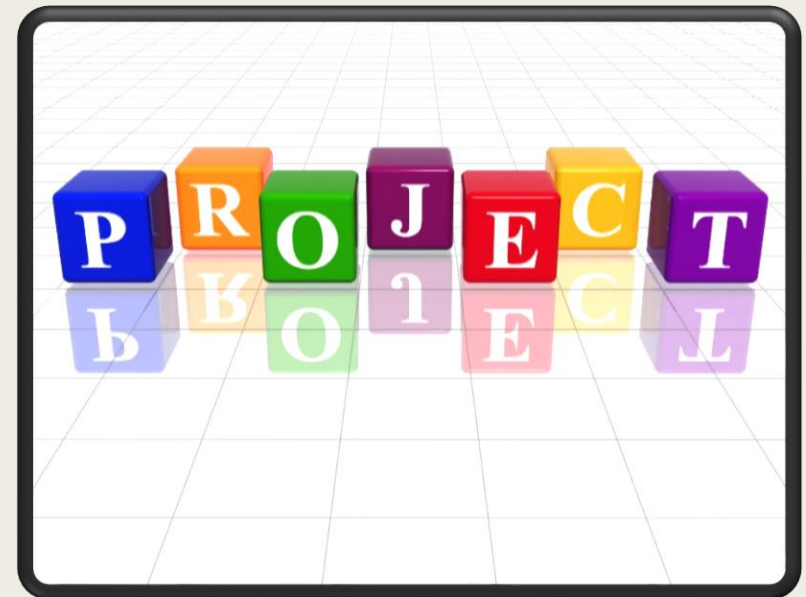
PRINCE 2

- “ A Project is a temporary endeavour undertaken to create a unique product, service or result”

PMBOK

Project Characteristics

- Unique
- Drives change
- Temporary
- Cross functional
- Has inherent uncertainty
- Drives business value creation



Project Management

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

PRINCE2

- Project Management is the application of skills, tools and techniques to project activities to meet the project requirements. Project Management is accomplished through the appropriate application and integration of the Project Management processes identified for the project. Project management enables organisations to execute projects effectively and efficiently”

PMBOK

Advantages of Project Management Principles in supporting researchers

Project management delivers an outcome that both sets and meets expectations of key stakeholders in a way that is predictable, and bound in scope

- Creates better predictability**
- Provides for better control** of resources needed for the project – financial, physical and human resources
- Creates informed outcomes** aligned with stakeholders and end users
- Better chance of meeting expectations**
- Better internal collaboration
- Improved worker morale** – everyone should know what their role is
- Better coordination
- More cost effective** with enhanced benefit outcomes
- Numerous Agile approaches** that will work well in a research environment.

Project Lifecycle

“Nothing is particularly hard if you divide it into small jobs”



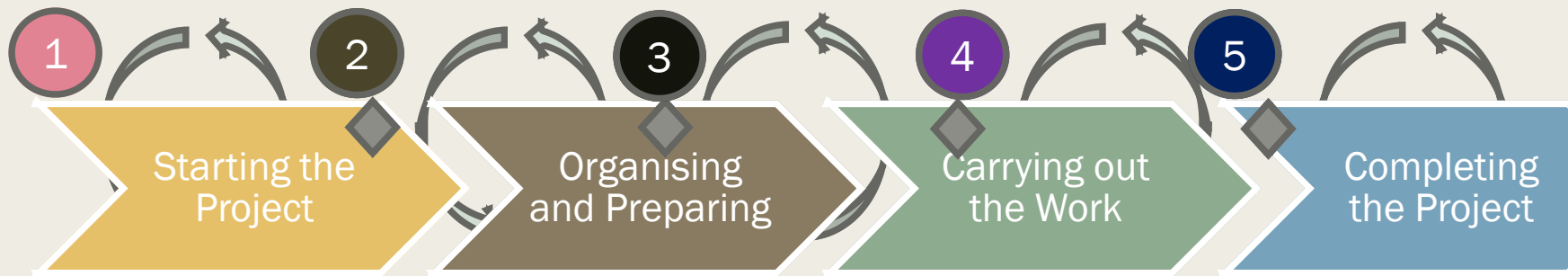
Henry Ford

Agile Stage Gate...

Fast Track Project Lifecycle / Checkpoints (Simple Projects)



Normal Project Lifecycle / Checkpoints (Complex Projects)



Benefits of Agile Stage Gate *

- A Hybrid of Agile and Stage Gate
- TAILORING is a big component – what’s right for the situation
- Gets the product or solution right: iterative development
- Deals with uncertainty: allows for ‘understanding of the problem’
- Accelerates development: can impose time bound phases
- Focuses teams: requires dedicated focused resources
- Improves within team communication

* Agile Stage Gate – The Next Generation Idea-to-Launch Process: Robert Cooper

Some concepts of Agile Stage Gate that can be applied to research

- Based on PMBOK (Waterfall) stage gate approach but with **TAILORING** flexibility
 - *to use the full process or a truncated / condensed process: depending on project complexity.*
 - *Process guidelines and checklists – agree what is appropriate / required with your sponsor.*
 - *Sets out a framework on project approach with flexibility built in.*
- **DESIGN THINKING** methodology
 - *Connect in with the end users / Customer of the project to help formulate approaches, ideas and priorities*
 - *Seek ongoing feedback and interaction with these users throughout the project lifecycle*
 - *Focus on satisfying the Customer / end user*
- **SCHEDULE and EXECUTION**
 - *Consider **SPRINTS** for discreet activities: focused work teams*
 - *Consider daily stand-up meetings for high priority / urgent pieces of work as they progress*
 - *Ensuring resources are focused on the right tasks – and it is a priority for them*

These are all elements of an Agile approach to project management working to incorporate these with the best bits of Waterfall.

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COMMON PROJECT PITFALLS

Common Project Pitfalls

- ❑ **Lack of alignment** to organisational strategy.
- ❑ **Unclear scope**, project goals, impact goals and experience goals – with user needs and wishes not clearly defined.
- ❑ **Poor communication** and **poor stakeholder management: last minute surprises.**
- ❑ Poor, or no detailed project planning – leading to poor estimation of resources to deliver the project.
- ❑ **Scope creep due to poor control**; “gold plating”.
- ❑ **Inadequate risk management** plan, with no mitigation and contingency plans
- ❑ Too many pet projects – defocuses resources.
- ❑ **Lack of decision making** with poor decision alignment / keeping a record.
- ❑ **Zero change control.**
- ❑ **Poor record keeping** – e.g. risks, decisions, actions, requests, meeting minutes change control etc.



Avoid the Swamp!

PM in a Research World: Perception or Real?



Repeatability Standards
Predictability Quality

Process

Healthy Tension

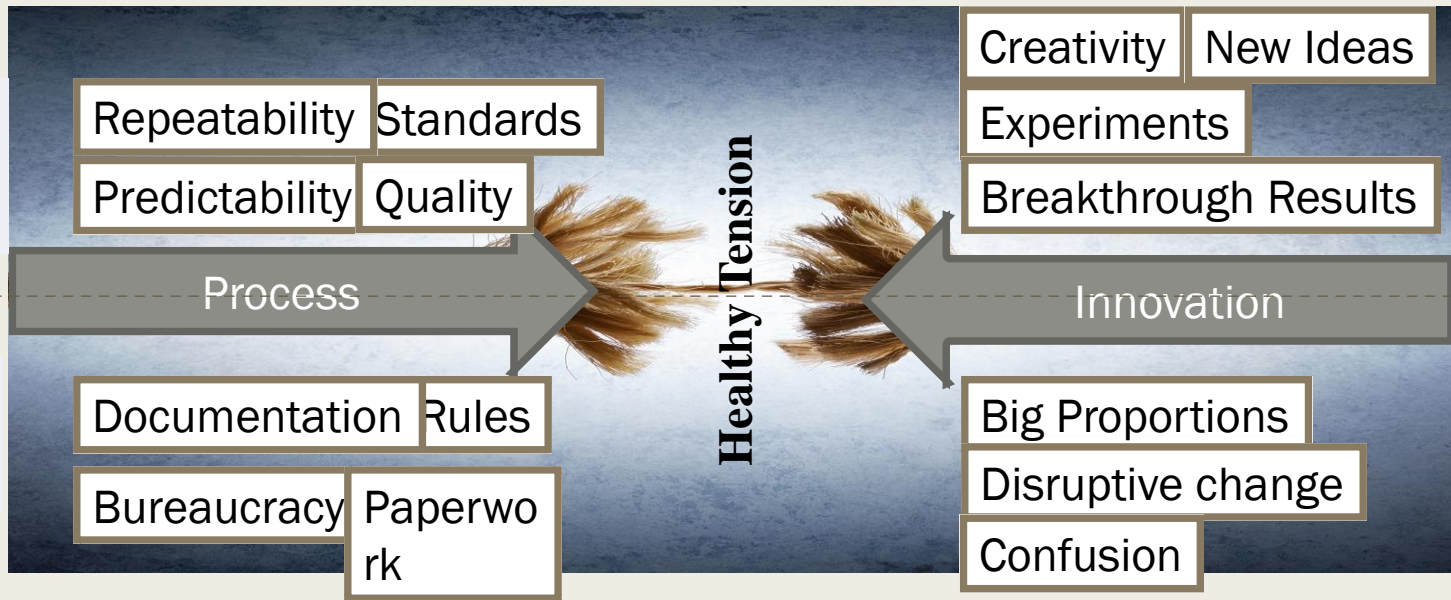
Creativity New Ideas
Experiments
Breakthrough Results

Innovation



Documentation Rules
Bureaucracy Paperwork

Big Proportions
Disruptive change
Confusion





PROJECT TEAM

ROLES AND RESPONSIBILITIES

- Sponsor
- Project Manager / PI for Research Projects
- Project Team Members

Project Sponsor Accountabilities

- Project Champion & **accountable for the project at the executive level**. Reports on the project.
- **Secures, and maintains, alignment with Stakeholders** and decides on **Project Board structure**.
- Nurtures and cares for the project.
- **Resolves conflicts & roadblocks**.
- **Secures funding and resources for the project**.
- **Validates project readiness**.
- Approves project changes.
- **Makes business decisions** on the project.
- Determines which decisions, issues and risks get escalated.
- **Sets and aligns on standards & expectations with the project manager**
- Ensure projects don't fall foul of common project pitfalls (see later slide).
- Transfers accountability of post project benefits review to the organisation.
- **Champion and chair project reviews at The Project Board meetings**.



Sponsorship Behaviours &



‘All Talk’

‘Says Nothing’

‘Moves Mountains’

← ON THE SIDELINES →

ON THE PITCH

Positive Sponsor Behaviours and Characteristics

- Sets and manages expectations clearly.
- Delivers on commitments / follows through.
- Open dialogue / Open door with PM.
- Resources and funds a project appropriately – focused resources.
- Meets PM regularly for project updates – through a Project Board meeting if needed
- Provides positive and constructive feedback.
- Actively removes roadblocks, particularly at a business / TU level
- Visible champion
- Appoints the right Project Manager/PI to the right project based on their strengths
- Active listening
- Results focused mind set. Clear on what success look like.
- Understands their strengths and weaknesses – and addresses them
- Proactive in behaviour
- Parks ego
- Uses their position to develop others
- Can do, and can I help attitude.
- Strong stakeholder engagement – ask how are my stakeholders better off because of me?
- Strong influencer – but being flexible and adaptable to new approaches
- Does not micro manage – allows the PM space to manage the project.
- Act in an ethical manner & with integrity

Negative Sponsor Behaviours and Characteristics

- No follow up.
- Does not deliver on actions or commitments.
- Negative and bio-reactionary.
- No communication / not contactable.
- Adds PM work on top of the PMs 'day' job with no resource impact assessment
- Does not respond to the PM.
- No belief in the project.
- No stakeholder engagement
- Ignores the PM and the team
- No active engagement
- Micromanages the PM

Identifying the Project Manager/ PI: Their Role

THE PROJECT MANAGER needs to have a 'systems thinking' approach

- Define the project management process to be used for the project and **define the project plan**
- **Identify project resource** needs and **secure these resources (including funding)** for the project
- **Ensures all team members are clear on their roles and responsibilities** – delegate tasks
- Prepare and **obtain management approval** for the project plan
- **Manage scope** and prevent scope creep / ensure no gold plating
- **Establishes priorities** among project activities, and develop the work plan with these priorities in mind

- **Manage the deliverables** according to the plan & Analyse the actual performance against the plan
- **Triggers effective change management** when needed
- **Resolve conflict** and addresses / actions issue and risks to ensure the project is successful and reduces risk to the organisation.
- Hold the Sponsor to account!
- **Engage with Stakeholders** and ensure their needs are met (**NO SURPRISES**). **Market the project and network with partners.**
- Develop and provide regular **project progress reports** and present project progress at the relevant forums in line with your funding agreements.

Stakeholders

A project stakeholder is anyone that is involved in, or affected by, the project

Examples of Stakeholders include

- *The Sponsor*
- *Partners*
- *Funders / funding agencies*
- *The Project Manager*
- *The Project Team*
- *Students*
- *Colleges of Directorates affected by the Project, and their staff as appropriate*
- *The Community*
- *Opponents of the Project*

Stakeholder Analysis & Mgt...particularly important with your funders!!

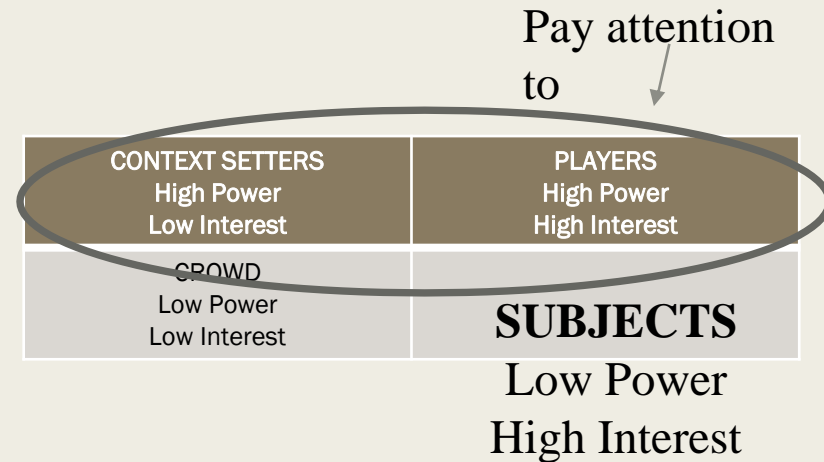
“ Paying attention to managing a specific set of stakeholders will have a powerful effect on achieving strategic goals and long term viability” (Ackermann and Eden)

Consider interviews with

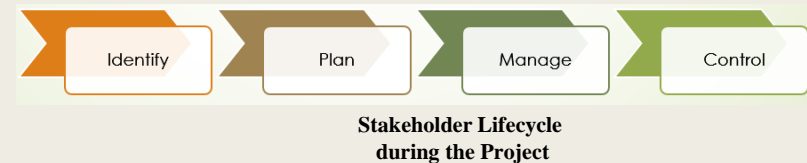
- ❑ Sponsor and Senior Managers (most influential)
- ❑ External Partners
- ❑ Key representatives from all relevant Colleges and Directorates
- ❑ Funders / funding agencies
- ❑ etc

The goal of these interviews is

- ❑ Understand their needs / priorities for the project
- ❑ Determine any compliance requirements
- ❑ Assess their level of interest in the project
- ❑ Determine their influencing power on the project outcome
- ❑ Understand how they would like to be communicated to / frequency
- ❑ Determine how to best manage them....



Create a stakeholder register from this activity



Characteristics/Skills of an effective PM / PI

- Sees the big picture
- **Values team members**
- **Good motivator and team leader**
- **Effective communicator** with excellent communication skills
- Familiar with Organisational practices and expectations
- **Understands/Expert in the core project management processes**
- **Strong Risk management skills**
- **Goal oriented with good planning and organisational skills**
- **Willing to challenge the status quo**, and challenge senior management!
- Committed to the project and well respected by their peers
- **Strong Listening skills**
- Strong vision and goal setting skills
- **Strong influencer....has excellent influencing and negotiating skills**

Six Unspoken Habits of Highly Effective Project Managers

- Tie your project to the business – all the time
- Know your audience
- Use Situational Thinking
- Take time to build talent
- Know the numbers
- Be the catalyst
- Projects are more likely to succeed when project managers influence with
 - expertise
 - work challenge
- Projects are more likely to fail when project managers rely too heavily on
 - authority
 - money
 - penalty

Project Human Resource Management

The PI's role

- Identifying the team, their roles and responsibilities, and reporting relationships
- Acquiring the team and also managing that team
- Working with each team member to **help develop them, motivate them, coach and mentor them**, and provide performance feedback.
- Helping the team in resolving issues and conflicts so that they can be successful.
- **Key motivational factors** include achievement, recognition, the work itself, responsibility, advancement, and growth, which produce job satisfaction (Herzberg)
- **Hygiene factors** cause dissatisfaction if not present, but do not motivate workers to do more. Examples include larger salaries, more supervision, and a more attractive work environment (Herzberg)
- Ensure **VALUE** and **IMPACT** for each member of the team

Final Comments

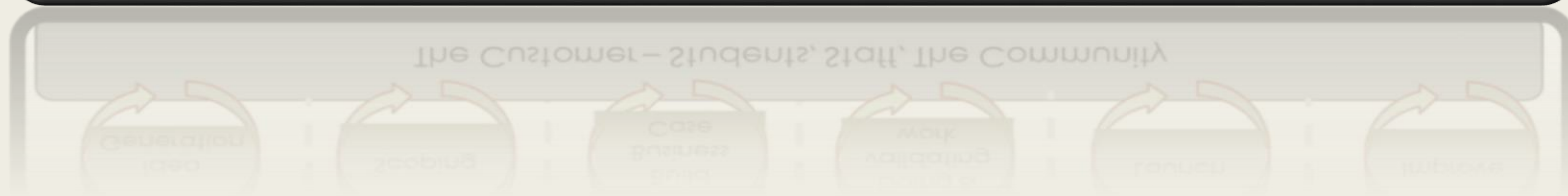
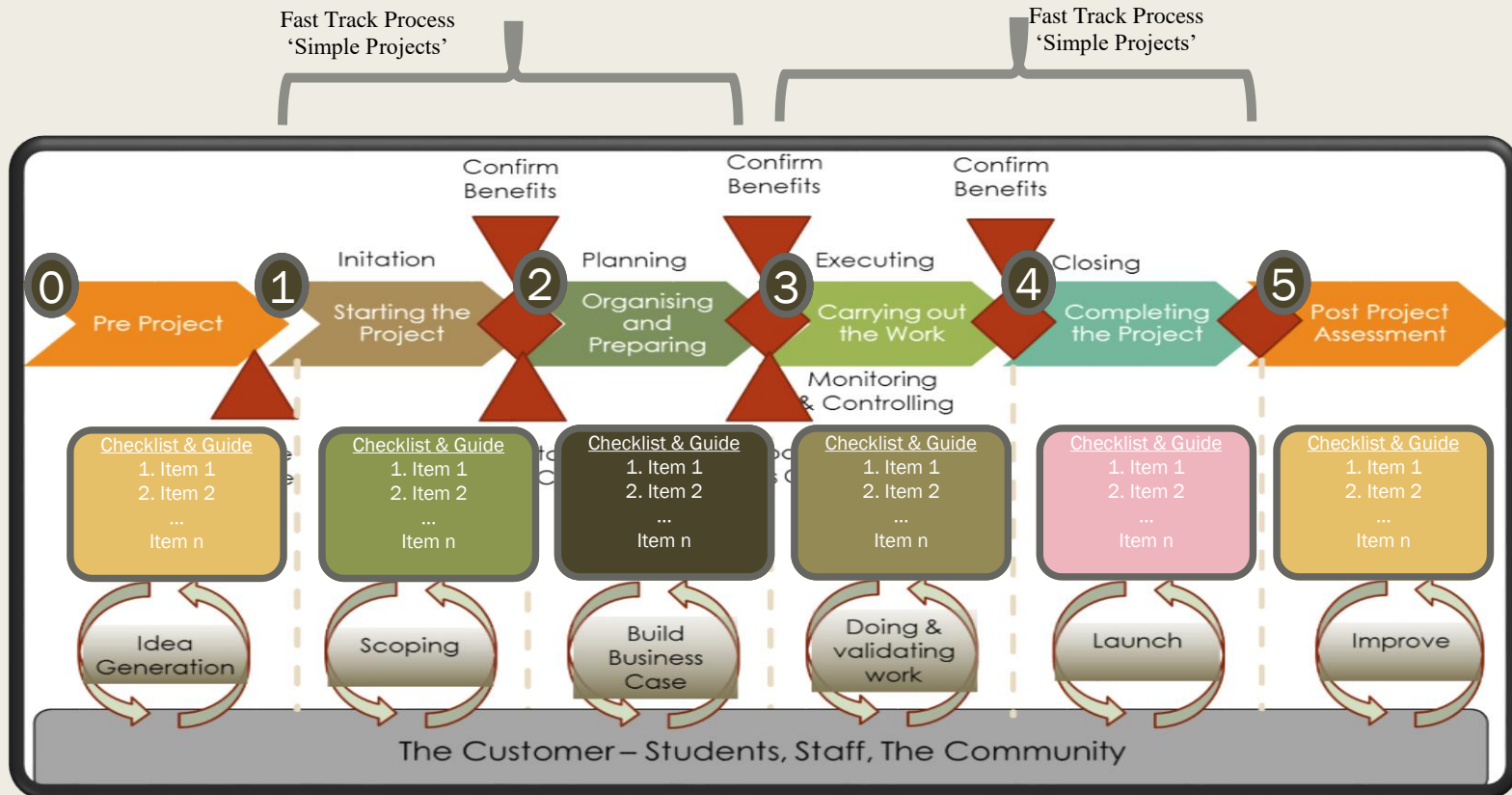
- Deploying a project management approach onto a research project will pay dividends
- Project management provides a framework for people on how to approach projects – from simple to complex
- Adapt approaches to fit the need – ‘TAILORING’
- Consider iterative approaches where appropriate – incorporate flexibility of AGILE. This will be particularly useful for research projects.
- For research projects, consider sub phases or milestones such as
 - *Concept (idea, technical approach, understanding inventions needed)*
 - *Invent (technical invention demonstrated, business scenarios defined)*
 - *Demonstrate (working version of the technology)*
 - *Characterize (variations characterised, value proposition confirmed)*
 - *Commercialise (technology is ready for use in volume)*



BACK UP SLIDES

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Adaptive Stage Gate...Support and [Guidelines](#)



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**TEMPLATES
AVAILABLE TO
SUPPORT PMS**

Useful PM Templates & Processes

Created by the TU Dublin City Campus PMO

[Ongoing template updates available HERE](#)

PROJECT TEMPLATES:

- [RAID LOG \(Risks, Actions, Issues and Decisions\)](#)
- [Work Breakdown Structure \(WBS\)](#)
- [Work Breakdown Structure Dictionary](#)
- [Work Breakdown Structure Brainstorm Tool](#)
- [Charter document for simple projects](#)
- [Charter document for complex projects](#)
- [Impact case](#)
- [Monthly project updates](#)
- [Project resource and skills needs](#)
- [RACI Matrix \(Responsible, Accountable, Consulted and Informed\)](#)

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PROCESSES and GUIDES:

- [Project Management Process Guide](#)
- [Project Governance Process](#)
- [Short guide to Starting the Project \(Project Initiation\)](#)
- [Short guide to Organising and Preparing the Project \(Project Planning\)](#)
- [Short guide to Carrying out the Work \(Project Execution\)](#)
- [Short guide to Completing the Project \(Project Closing\)](#)
- [‘Starting the Project Review’ presentation template \(guide to minimum presentation content\)](#)
- [‘Completing the Project’ presentation template](#)

Focus areas for 'Starting a Project' phase



CLEARLY DEFINE & SCOPE THE PROJECT

- ❑ Sets clear 'tops down' direction for the project and it's priorities.
- ❑ Clarity on why the project is being carried out (what problem is it solving), what the benefits are and what the desired impact is for The TU.
- ❑ ENSURING THE PROJECT IS A STRATEGIC FIT and has a compelling and SOLID BUSINESS CASE.
- ❑ Aligning Expectations with Stakeholders and the User Community (of the outcome).
- ❑ Ensuring NO surprises for stakeholders.
- ❑ Defining and aligning on, the work (with clarity e.g. Is/Is Not) – and ONLY the work that needs to be completed (no gold plating).
- ❑ Setting clear boundaries on project completion criteria / what does success look like?
- ❑ Understanding what high level resources, and skills, are required for the project to be successful.





Starting the Project Phase – Key Requirements

- Project Charter complete with Project Objective Statement and Problem Statement clear
- Scope – what’s in / out
- Impact goals clearly stated
- Competitive and Industry Comparative assessment
- Predicted benefits – and assumptions used (are they real?)
- Alignment to Strategy – reinforced.
- Experience improvement goals
- Top Level assessment of Resource Needs overview (Funding, Cash flow, Resources)

- User & Stakeholder needs / Unmet needs
- Objectives, deliverables and metrics (Measures of Success)
- Milestones and high level schedule summary / phases
- Top Level assessment of Risks, Issues and Challenges
- Define Project approach
- Outline any exceptions to checkpoint/stage gate requirements with plans to resolve
- Lessons learned insight from previous projects / actions taken

'Organising & Preparing the Project: Focus Areas



THE FOCUS OF THIS PHASE IS TO CLEARLY DEFINE, IN DETAIL, WHAT NEEDS TO HAPPEN , WHEN AND BY WHOM

- Review key items from the starting the project phase for remaining validity
 - ✓ *Risks, issues, scope, business case, budget and resource needs*
- Divide deliverables into smaller, more manageable chunks of work and validate detailed scope – and who is doing the work (work breakdown structure assessment)
- Create a detailed schedule along with an accurate critical path assessment
- Confirm project baseline scope and change management approach
- Identify external procurement and contract needs for the project – what is being ‘bought in’
- The output of this phase is the project management plan.

'Organising and Preparing' the Project Phase – Key Requirements

- Project Charter updated. Business case check
- Project structure and approach
- Project scope statement - What is all the work
- Detailed Schedule
- Procurement identified, vendors identified & e-tenders ready
- Milestones / Project Phases & critical path
- Work Breakdown Structure (WBS)

- Resource, budget and cash flow
- Roles and Responsibilities
- Risks updated
- Issues updated with clear path forward
- Change Management plan
- Phase exceptions and path forward
- Lessons Learned

‘Carrying Out the Work’ & ‘Monitoring and Controlling’ Project Phase

The focus of the ‘Carrying out the Work’ phase is to complete the work according to the Project Management Plan (and ONLY that work)

- Continuing to confirm that the business case is still valid.
- Collecting and defining execution status of the work according to the plan.
- Highlighting variances, causes and path forward to resolution.
- Updating relevant logs :
 - Risk management*
 - Actions and Issues log*
 - Decisions log*

- Monitoring and controlling costs, and cash flow.
- Controlling scope
- Project quality management.
- Actions taken to control the project.
- Performing change control as needed.
- Communication of progress and changes to stakeholders.

'Completing the Project' Phase

The focus of the 'Completing the Project' phase is to demonstrate that the Project has delivered on the project objective & deliverables.

A Project can close only when **one** of the following has occurred:

- All requirements have been met and the customer approves that all project deliverables have been achieved.
- Management has decided to terminate the project before planned completion.

AND

- A project closure report / project review has been completed



'Completing the Project'

Phase: Main

The focus of the 'Completing the Project' phase is to demonstrate that the Project has delivered on the project objective & deliverables.

- Demonstrate that the project has achieved its deliverables and that the Customer has accepted the outcome (e.g. product, process, solution).
 - Ensure that all user needs agreed have been met.
 - Illustrate how the success of the project will be tracked in an operational environment (i.e. how we measure long term success versus the planned outcome).
 - Ensure that any phase exceptions have been highlighted with path forward defined.
- Ensure financial acceptance of the project outcome.
 - Procurement contracts are closed out.
 - Gather lessons learned for the entire project and develop recommendations for future projects.
 - Project Documents are appropriately archived and meet document retention guidelines.
 - Resources freed up from the project to move on to other priorities.
 - Complete project close out report / presentation

Reference and source

International Project Management by Kathrin Koster | Mar 17, 2014

The Complete Project Management Office Handbook (ESI International Project Management Series) Part of: ESI International Project Management (19 Books) | by Gerard M. Hill | Sep 5, 2013

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International Management Behavior: Global and Sustainable Leadership by Henry W. Lane and Martha L. Maznevski | Feb 7, 2019

The Law and Business of International Project Finance: A Resource for Governments, Sponsors, Lawyers, and Project Participants by Scott L. Hoffman | Oct 22, 2007