GHDWOODHEAD

PROJECT MANAGEMENT PLAN

AS A TOOL TO DEVELOP EFFECTIVE COMMUNICATION TO MANAGE STAKEHOLDERS AND THE DESIGN TEAM

Adelaide Airport plaza

Event:

Design and Development of Stations and Terminals Conference June 2017

27 June 2017

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Appendices

What is a Project Management Plan?

A Project Management Plan (PMP) is a formal approved document that defines how the Project is ***executed, monitored*** *and* ***controlled***. It is the ***skeleton that provides the structure*** for all other reports, plans and schedules. It should be agreed by all key stakeholders.

It will contain detailed baselines, detailed management plans and other planning documents. The PMP is used to ***define the approach used by the Project team*** to deliver the intended project management scope of the project. The project manager creates the PMP following inputs from the project team and the key stakeholders – it is a collaborative document.

The PMP is not created all at once. It is progressively developed, which means it is refined, revisited and updated as the Project progresses. Since PMP integrates all the various management plans into a cohesive whole, it needs to be finalised after all the management plans have been created. It is important to have a Draft PMP very early in the Project inception to ensure all the required management plans and schedules are agreed and included to ***ensure stakeholder expectations are clarified***.

The PMP should be formally agreed and version controlled in the early stages of the Project as it develops during the life of the Project and processes applied throughout the project.

The performance of the Project is measured against the performance measurement baselines identified and described in the PMP. ***The PMP defines how the project is executed, monitored and controlled, and closed***. It is progressively elaborated by updates throughout the course of the project.

The PMP is also a communication vehicle for ensuring key stakeholders share an understanding of the project.

The PMP is ***NOT just a project schedule or program***. A project program lists planned dates for performing tasks and activities to meet milestones identified in the PMP. The PMP is the project specific framework for a collection of procedures and management plans to assist the delivery of the Project.

PMP Introduction

The Introduction provides a high level overview of the project and what is included in this Project Management Plan (PMP). This should include a high level description of the project and describe the projects deliverables and benefits.

Excessive detail is not necessary in this section because other sections of the PMP will include the information. This section should provide a ***summarised framework of the project and its purpose.***

The PMP is a formal, approved document used to manage project execution. The PMP documents the actions necessary to define, prepare, integrate and coordinate the various planning activities.

A PMP contents could include:

- PMP Introduction
- Project Management Approach
- Project Scope
- Project Constraints
- Key Project Roles and Responsibilities
- Key Stakeholders
- Project Milestones
- Preliminary Schedule of Deliverables
- Change Management Plan
- Communications Management Plan
- Cost Management Plan
- Project Scope Management Plan
- Project Program/schedule Plan
- Quality Management Plan
- Risk Management Plan

Project Management Approach

This section outlines the overall management approach for the project. It should describe, in general terms, the roles and authority of project team members. It should also include which organisations will provide resources for the project and any resource constraints or limitations. If there are any decisions, which must be made by specific individuals (for example authorising additional funding by the project sponsor), it should be noted here. The Approach should be ***written as an Executive Summary*** for the PMP.

Generally the ***Project Manager has the overall authority and responsibility*** for managing and executing the project according to the PMP and its Subsidiary Management Plans.

Some key considerations include:

- Whether portions of the project will be delivered separately in a staged approach to provide benefits earlier in the project lifecycle. (e.g. separable portions within a contract framework).

- Whether significant, discrete work packages will be managed as separate sub-projects.

- Clear team and stakeholder organisational structure and responsibilities.

The American Psychological Association found that multitaskers experience a 40% drop in productivity.

The average employee loses 2.1 hours a day to interruptions or distractions, according to Basex.

Project Scope

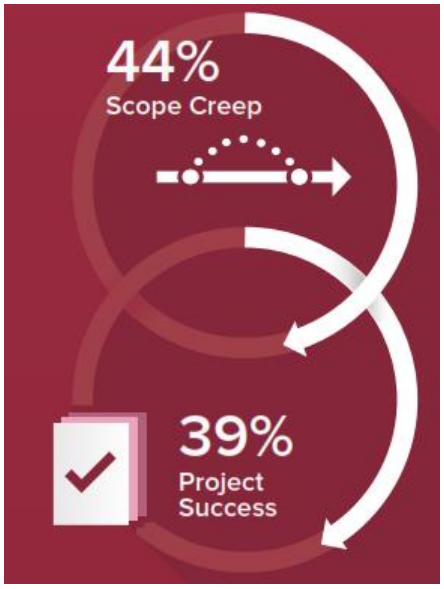
The scope statement from the Project initial planning documents could be used as a starting point; however, the PMP needs to include a much more detailed scope and requirements.

The detail should include ***what the Project does and does not include***. The more detail included in this section, the better. It will clarify with Key Stakeholders the extent and reach of the Project. This will help to clarify what is included in the project and ***help to avoid any confusion from project team members and stakeholders*** and limit future misunderstanding.

The scope of the Project may also include completion of all documentation, manuals, and training aids to be used in the operation and commissioning. A detailed Project Scope Management Plan should be developed as well as a Change Request management Plan to control changes.

PMI found that 44% of projects completed in 2015 experienced scope creep.

Only 39% of projects succeed, according to a 2012 study by the Standish Group.



Project Constraints

Stating the Project constraints at an early stage will help to inform the Project team and stakeholders during the subsequent design stages. ***Constraints will change during the project*** and should be a live list. As more detailed design occurs some ***constraints may be designed out*** and potentially new constraints are uncovered. Early identification of constraints will allow the design team to work around them and potentially reduce any mitigation required.

Three key areas are:

- **Inclusions:** Indicate key deliverables, requirements and/or functionality that the project is committed to delivering. Information should come from Project Charter.

- **Exclusions:** Indicate key deliverables, requirements and/or functionality that is specifically excluded from the Project's scope. Information should come from Project Charter.

- **Key Assumptions:** Specify any assumptions that are driving the project approach. Information should come from Project Charter.

Chatswood Transport Interchange – Live rail environment

Key Project Roles and Responsibilities

Clear communication is key to the success of a project. Identifying roles and responsibilities across the whole Project team is an ***effective way to promote lines of communication***. Typically some of the key Project roles include:

Project Steering Committee:

- ***Represents executive stakeholders*** interest in the project.
- Provides ***strategic advice*** to Project Sponsor and Operator (End User) regarding trade off decisions and issue resolution.
- ***Acts as Change Control Board*** for project change requests.
- Actively participates in ***regular assessment of overall project health*** discussions and meetings to ensure:
    - Project vision is on track
    - Approval of Change Requests
    - Impact to customer/employee experience
    - On track with budget allocation

Project Sponsor (Transport project in NSW it will generally be TfNSW):

- Secures organisational support and funding for the project.
- Defines strategic objective of the project.
- Participates in project level governance.
- Makes final, critical project decisions.

Operator or End User:

- Defines project scope, objectives and success criteria.
- Provides direction and high level business requirements.
- Provides oversight of the integrity of the value proposition throughout the project lifecycle.
- Provides oversight of project progress and direction through review and approval of key work products.
- Participates in project-level governance activities.
- Resolves escalated operator issues.
- Accountable for Business Case.

Overall Project Manager (Owner of the PMP):

- Accountable for overall execution, management and delivery of a project (scope, budget, and program).
- Establishes and facilitates the project level governance team.
- Provides leadership of project team.
- Responsible for project artifacts.
- Plans and manages project activities.
- Manages project schedule and costs.
- Tracks and reports project progress.
- Manages stakeholders.
- Manages and resolves issues and risks.
- Contract Management.

Technical Project Manager:

- Coordinates departmental or cross-functional technical teams.
- Ensures completion of the technical deliverables within the project scope.
- Coordinates and aggregates project resourcing.
- Manages technical activities and tasks and updates project program.
- Supports overall Project Manager in monitoring and reporting project health and status.

Operational specialist:

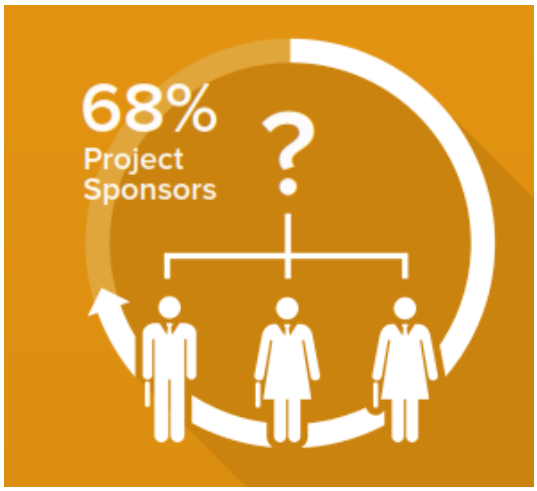
- Investigates and analyzes operational issues and manages the discovery and documentation of Project requirements.
- Facilitates communication between the Operator and technical teams
- Responsible for Test Management procedures.

Project Team Members:

- Perform tasks as assigned in the PMP and detailed Project Plans.

The Communications Management Plan will have the detail and strategy of the Project communication and where the roles and responsibilities are defined.

According to a 2014 study by professional service company KPMG, 68% of projects don't have an effective project sponsor to provide clear direction or help address problems.



Key Stakeholders

Strive to ***identify as many stakeholders as possible***, as early in the project as possible. These may include local interest groups, local Heritage society, Local Clubs or associations.

Three stages are:

Identify Stakeholder: List all groups that may be affected or have an interest in the project.

Identify specific Representative: List the specific person(s) who will represent the stakeholder group on the Project team. This ensures accountability

Specific Responsibilities: Describe the group's interest, including direct impact and corporate oversight concerns. The Representative must have the authority to speak on behalf of their group or at least take items on notice and have them resolved.

IT is a significant component of infrastructure projects, from signalling to information systems.

38% of IT projects include confusion around team roles and responsibilities, according to a 2011 study by Geneca.

Project Milestones

Provide a summary list of milestones including dates for each milestone and any critical path issues related to other milestones. Include an introductory paragraph, which provides some insight to the major milestones. This section should also mention or discuss actions taken if any changes to the milestones or delivery dates are required.

The ***milestones will inevitably change*** during the Project, processes must be in place to manage change and evaluate the implications of change, both late and early for milestones. There is ***usually a cascade effect*** and co-dependence of milestones.

The key milestones must be included and co-ordinated with the Project Program.

Preliminary Schedule of Deliverables

The deliverables and Milestones must be constantly monitored, to ensure they equate to the Project Program – these two documents should align. There are generally three main portions to a Project lifecycle:

Planning stage: Note key dates for delivery (or best guess at the time to be updated)

- Key deliverables
- Significant Milestones

Construction and delivery: Note key dates for delivery.

- Key deliverables for each phase – Design documentation and construction
- Significant Milestones for each phase

Commissioning and testing: Note key dates for delivery.

- Key deliverables
- Significant Milestones

The key deliverables must be included and co-ordinated with the Project Program.

Change Management Plan

It will be some type of ***organisational repeatable standard*** which is done on most or all projects when a change is necessary. Changes to any project must be carefully considered and ***the impact of the change must be clear*** in order to make any type of approval decisions.

Many organisations have Project Steering Committees which review proposed changes and either approve or deny them. This is an effective way to provide oversight and ensure adequate feedback and review of the change is obtained. This section should also identify who has ***approval authority*** for changes to the project, who submits the changes, how they are tracked and monitored.

The typical process to manage changes is:

Step 1: Identify the need for a change (Any Stakeholder). Requestor will submit a completed Change Request form to the Project Manager

Step 2: Log change in the Change Request register (Project Manager)

- The project manager will maintain a log of all Change Requests for the duration of the project.

Step 3: Conduct an evaluation of the change (Project Manager, Project Team, Requestor)

- The Project Manager will conduct an evaluation of the impact of the change to cost, risk, schedule, and scope – if within predetermined limits or guidelines a decision can be made to proceed or not.

Step 4: If outside predetermined limits or guidelines submit Change Request to Project Steering Committee for consideration (Project Manager)

- The decision to proceed or not will be at the discretion of the PSC.

Step 5: Project Steering Committee (PSC) decision

- The PSC will discuss the proposed change and decide whether or not it will be approved based on all submitted information.

Step 6: Implement change (Project Manager)

- If a change is approved by the PSC, the Project Manager will update project documentation as necessary as well as ensure any changes are communicated to the team and stakeholders.

Communications Management Plan

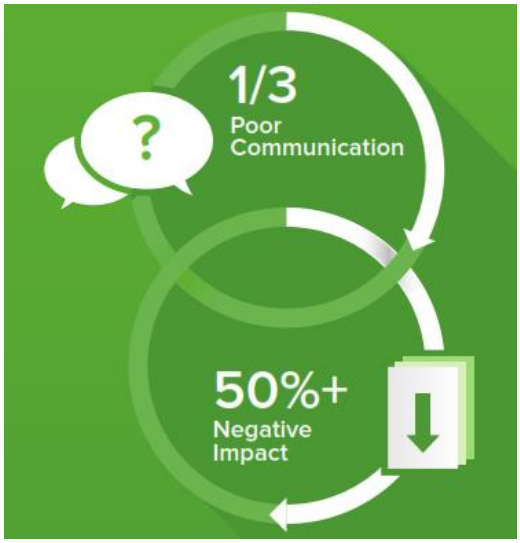
The purpose of the Communications Management Plan is to define the communication requirements for the project and ***how information will be distributed*** to ensure project success***, both internally and externally***. Considerable thought should be given to how communications are to be managed on every project. A well defined communications management approach will help to avoid many potential problems. The Plan should provide an overview of the communications management approach, including internal Project team management and external stakeholders.

Generally, the Communications Management Plan defines the following:

- Communication requirements based on roles
- What information will be communicated
- How the information will be communicated (electronically, hardcopy, workflow system)
- When will information be distributed
- Who does the communication (Project team directory)
- Who receives the communication (both internally and externally)
- Communications conduct

For larger and more complex projects, the Communications Management Plan may be included as an appendix or separate document apart from the Project Management Plan. ***The Plan covers all types of communications including, meetings, e-mails and informal communications***

A 2013 PMI study found that poor communication was the primary contributor to project failure one third of the time and had a negative impact on project success more than half the time.



Cost Management Plan

The Cost Management Plan clearly defines how the ***costs on a project will be managed*** throughout the Project's lifecycle. It sets the format and standards by which the project ***costs are measured, reported, and controlled.*** Working within the cost management guidelines is imperative for all project team members to ensure successful completion of the project.

The Cost Management Plan:

- Identifies ***who is responsible*** for managing costs
- Identifies ***who has the authority*** to approve changes to the project or its budget (hand in hand with Change Management Plan)
- How cost performance is ***quantitatively measured*** and reported upon
- Report formats, frequency and to whom they are presented

For complex or large projects the Cost Management Plan may be included as an appendix to the Project Management Plan or as a separate, stand-alone document. Generally a Quantity Surveyor will provide this input.

The ***cost estimate is the baseline*** cost for the project and will be prepared and revised at least at the:

- **End of Planning:** Cost estimates are baselined in the Planning Business Case. Expectation is the estimate will be plus or minus 25% in terms of accuracy.

- **End of Design Development :** (could also be at the concept design stage as an preliminary cost check) Cost estimates are fully baselined in the Execution Business Case. Expectation is the estimate will be plus or minus 10% in terms of accuracy.

Project Scope Management Plan

Managing the Projects' scope is critical to the success of the project. ***Scope should be clearly defined and documented in detail****.* A clear scope definition allows easier management of stakeholder expectations. Failure to clearly establish and communicate Project scope can result in delays, unnecessary work, deliverables not achieved, cost overruns, or other unintended consequences.

Changes to scope of the project are inevitable**. *A rigorous Change Management process should be established*** and documented for all stakeholders and project team to follow. Recognising changes will occur and allowing a process to accommodate and evaluate them will help to ensure ***scope will not "drift" without agreement.***

The Scope Management Plan should addresses the following:

- Who has authority and ***responsibility for scope management*** – hand in hand with Change Management plan
- How the ***scope is defined*** (i.e. Scope Statement, Planning approval conditions, Project brief, requirements register, etc.)
- How the ***scope is measured*** and verified (ie. Quality Checklists, Requirements register, scope Performance Measurements, etc.)
- The ***scope change process*** (who initiates, who authorizes, etc.)
- Who is responsible for accepting the final project deliverable and approves acceptance of project scope

Scope Requirements Register is a useful tool to capture all scope and deliverables for the Project. They can be tracked and "closed out" as the design progresses through to delivery. This ***will provide traceability of requirements*** for the Project team and stakeholders.

Project Program/Schedule Plan

The Project Program is one of the most important tools to communicate the Project lifecycle to the Project team and stakeholders. ***It summarises all the key processes, deliverables and milestones*** from planning, design, construction and commissioning. ***It is a live document*** and will be regularly updated as more information and actual dates are achieved.

Effective program management is necessary for ***ensuring tasks are completed on time***, resources are allocated appropriately, and to help measure project performance. They start with the early planning stages of the Project, through design, construction and ultimately commissioning.

The Plan should include:

- Type of programming tool/format
- Key responsibilities.
- Reporting framework
- Project Program

Key elements of the Project Program are:

- Approval processes
- Milestones (Design and construction)
- Deliverables (Design and construction)
- Critical path dependencies

Quality Management Plan

The Quality Management Plan discusses how quality management will be used to ensure that the ***deliverables for the project meet a formally established standard*** of acceptance specifically for the Project. Usually the Plan will be underpinned by a Quality Assurance system which will generally be to ISO 9001.

Quality management is the process by which the Project team not only completes the work, but ***completes the work to an acceptable standard***. Without a thorough Quality Management Plan (QA system), work may be completed in a varying standard or unacceptable manner.

The Plan should define:

- Quality roles and responsibilities for key team members,
- Quality control processes for design and construction stages,
- Quality assurance procedures and processes,
- Quality monitoring for design and construction stages.

Risk Management Plan

Early identification of project risks is essential to ensure there is opportunity to design out as many as possible. This means there will be less residual risks to be passed onto the end user or operator. ***Early mitigation measures can also have more options if the risks are identified early*** in the Project lifecycle. Awareness of the risk will require decisions on whether to accept the exposure to the risk and will direct mitigation activities.

The Risk Assessment matrix looks at identifying and prioritising each risk that could or does threaten the project's ability to meet its objectives within the program, scope and budget. ***Risks are rated on their consequence*** (impact on the project or organisation activities) ***and likelihood*** (the probability for the risk to happen). All risks will be captured on the Risk Register and will be constantly monitored and updated during the Project.

The risk assessment will be performed throughout the life of the project, the potential impacts on the project's success, and how the results and recommended contingencies to manage or mitigate the risks will be communicated to Project team and stakeholders. Significant risks will generally be elevated to the Project Steering Group for evaluation.

Typical Risk assessment matrix

LIKELIHOOD	CONSEQUENCE				
	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain	High	High	Extreme	Extreme	Extreme
Likely	Moderate	High	High	Extreme	Extreme
Possible	Low	Moderate	High	Extreme	Extreme
Unlikely	Low	Low	Moderate	High	Extreme
Rare	Low	Low	Moderate	High	High

Issues don't have a "likelihood". Unlike Risks, their likelihood is 100% certain, they will happen or are happening. Issues as they arise must be added to the Risk Register and reported to the Project Steering Committee for evaluation.

All ***residual risks must be assigned*** to the end user, operator or maintainer. There must be ***agreement for the assignment of the risk***. This is why early identification of the potential risk is important, allowing time in the design process to ***reduce the risk or even design it out***.

Appendix A
Topic areas for discussion

Case study: Chatswood Transport interchange

Future for Transport

When you consider the ***future of transport hubs***, careful consideration goes into how to modernise and design them accordingly to meet the long-term business objectives around a future of smart stations and cities. Stations need to ensure they are ***fully integrated*** with rail services and onward travel modes to accommodate intermodal travel, information and ticketing technologies to support and enhance ***customer experience*** at Transport hubs.

Transport nodes need to be considered as a ***catalyst for innovation*** to enhance transport modes and local economies.

These aspects are part of furthering the design and development of transport hub into smarter, futuristic and lively precincts. ***Success requires careful long-term planning***, particularly in the project definition and delivery stages of the project.

Task:
Using the Chatswood Transport Interchange case study, we will discuss "high level" input for sections of a PMP related to the following topics and summary wrap up of key PMP areas of project influence and general questions.

Topics for discussion:

"Failure to Plan is planning to fail"

Topic 1: Outline the stages of involvement for the design team to minimise development time and ***ensure cost efficiency*** of the project

- Consider the different stages of the project process from EIS, Reference Design, PPP and commissioning
- Consider capital expenditure and ongoing operating cost.
- Which PMP sections cover the Topic and why?

Topic 2: Develop ***effective communication*** to best handle conflict of interest between stakeholders in regards to design and development requirements

- Consider the different key drivers for Private and Public sectors.
- Consider both internal and external stakeholders.
- Which PMP sections cover the Topic and why?

Topic 3: Highlight the importance of environmental, sustainable and safety requirements built into the design to accommodate ***customer expectations*** for future stations

- Consider construction staging and final outcome.
- Which PMP sections cover the Topic and why?

Topic 4: Post-project analysis: how to ensure your design continues to grow along with ***future customer demand***

- Consider future proofing initiatives.
- Which PMP sections cover the Topic and why?

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