

# PROJECT MANAGEMENT

A guide to the best practice management  
of facilities development projects



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## Introduction

This Guide has been developed by Football NSW to provide information to support Associations, Clubs, Councils and other facility owners in the development of football facilities. This Guide relates to the project management of facilities development projects.

Project management provides a systematic approach to the management of projects, regardless of size, duration and complexity, helps the management team to apply a degree of structure to the project, to manage the inherent risks and to achieve successful completion of the project.

The diverse nature of projects requires a diverse range of management strategies to manage a wide variety of risks that differ in likelihood and severity from one project to another. The project management approach should be consistent with the project phases and right sized to suit your facilities development needs.

To help determine your project needs, please also refer to the other FNSW Technical Guides for specific information about different types of development projects (i.e. synthetic grass, lighting, fencing, etc.).



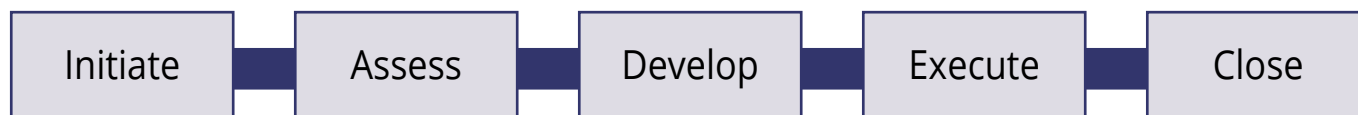
## Project Management

In the Guide to the Project Management Body of Knowledge (PMBOK), the Project Management Institute (USA) defines project management as “the application of knowledge, skills, tools and techniques to project manage activities to meet project requirements” (PMI 2000).

Project management has the following benefits:

- It ensures that the facility which the project is to deliver is clearly defined and understood by all parties;
- It promotes a logical approach to planning and encourages more accurate estimating of time, cost and other resources; and
- It provides a consistent means to monitor and control project issues and risks.

Key phases of a project are:



### INITIATE

During this stage you should prepare your project and assign the Project Manager to:

- Determine project purpose/need (what facilities do I need);
- Explain the background and context of the project (who owns the facility, who else uses the facility, why is the facility development project required);
- Determine priority and other related/dependent projects;
- Identify and evaluate alternatives, if any;
- Undertake Stakeholder Analysis (identify and analyse their needs and determine whether they can use the facilities and whether they should be involved in the project);
- Document the project scope and proposal (business plan and justification for your project for funding or development approval);
- Determine project governance and Terms of Reference, outlining
  - Organisation structure
  - Delegation and approval limits
  - Roles and responsibilities;
- Determine Inclusions, Exclusions, Assumptions, Constraints;
- Determine outstanding issues to be resolved;
- Determine and outline the Deliverables and expectations on how they should perform
- Establish project objective(s);
- Determine preliminary timeframes (milestones);
- Determine preliminary cost estimates;
- Determine resources and any procurement plans (who and what you need to deliver); and
- Undertake preliminary risk assessment.

## ASSESS

During this stage you should review your project to decide if the project can go ahead, including:

- Formally agree your project approach and obtain approval to progress;
- Agree and acquire resources for the Develop stage (recruitment, secondment, or procurement);
- Establish your project committees; and
- Establish your project reporting and implement the agreed project approach.

## DEVELOP

During this stage you should complete facility development documentation and resourcing, including:

- Develop and test the design;
- Complete the Development Approval documentation and submit and obtain approvals;
- Finalise any business case and/or funding submissions and obtain funding;
- Agree and acquire resources for the Execute stage (Procurement of facilities building services and suppliers);
- Plan the operational handover and commissioning process (develop a Handover Plan);
- Prepare to formally Close the project; and
- Monitor, manage and report on the project status.

## EXECUTE

During this stage you should complete the facility development construction or supply, including:

- Appoint build contractors and suppliers;
- Build the facilities;
- Complete the required approval documentation, submit and obtain approvals in accordance with your development consent;
- Train and prepare users (if relevant) ready for the handover to transition the facility to operation; and
- Monitor, manage and report on the project status.

## CLOSE

During this stage you should review the completion of the facility development construction or supply and transition to the user and/or operator of the facility including:

- Implement the Handover Plan;
- Review the facilities build, report defects and plan rectification of works (if any) with the builder;
- Obtain Occupation Certificates, if required as a condition of your development consent;
- Test the facilities, complete training and transition to the operator / user of the facility;
- Undertake Post-Project Review (including lessons-learned and benefits review);
- Undertake project administrative and resources closeout (invoicing, payment and contractual termination); and
- Celebrate the success of the new facility.

## Project governance principles

### Who to include in your Project Committees

A number of different approaches can be used to develop a project and establish its governance. These could include:

- Internal approach - the project is undertaken by members of the club in consultation with the facility manager. This may be relevant for small improvement projects such as minor signage or equipment upgrades;
- External approach - the project is undertaken by private consultants who provide expert advice. This is typical for a large scale project and / or if an independent assessment is required; and
- Combined approach - the project is undertaken by a mix of internal and external personnel but is led by a project manager/co-ordinator (the club officer responsible for the project).

#### **TIP**

Engaging an external professional project manager early in the process can save your project money and delays in the longer term. They can assist you to review your project risks, to plan your approach, to establish the Terms of Reference for your Project Committee, to procure other providers you may need and to help you manage your project.

A Project Committee comprising Club / Association executive, Facility Owners and Council should be formed to establish the initial feasibility of a project. Once you have established the required funding and resources to manage your project then you should transition to a Project Control Group or Project Committee.

For projects that are considered to have moderate or high risk because they involve large scale capital works or they affect multiple community groups or require a Development Approval, membership of the Project Committee should include representation from the key decision making stakeholder groups and may include:

- Club / Association management members;
- Community/business sector representatives;
- Representatives of other user groups/tenants if the facility is shared; and
- The owner/ facility manager / or Council Representatives.

The make-up of the Project Committee will depend upon the type of facility being proposed. The committee should have the power to co-opt other professionals and individuals if and when required.

### Establish Project Committee Terms of Reference

Terms of Reference (TOR) for the Project Committee should be established and agreed that provide:

- An outline of the purpose of the committee;
- The reporting relationship between the club and the committee;
- Details of the project budget and other available resources;



- Outline the parameters of the project;
- The philosophical base of the project and how this impacts practically on the proposal;
- What must be investigated and reported upon;
- The aims and objectives of the proposed facility;
- Expectations regarding community involvement/ community consultation; and
- Expectations regarding the outcomes/outputs of the feasibility study report.

The TOR project parameters should include:

- Investigate and report on the social, sustainability and financial viability of the proposed facility;
- Identify a site/s that will maximise access to the facility;
- Investigate management options and recommend an appropriate facility management model;
- Investigate and report on any special facility needs that should be incorporated into the design (e.g. disabled access); and
- Approach to planning, design, construction and management of the project.



Useful principles in the design of the Project Committee (or project board) are:

- Include representatives who will use the planned facilities;
- Include representatives of the proposed suppliers or developers (appropriate to the stage of the project and after the procurement process is complete);
- Consider inclusion of those more indirectly affected, such as Council (and or owners) and other community users;
- Be clear on the powers of the committee. To maintain clear accountability, a common arrangement is that the committee will advise the project team, however, in some circumstances it may be appropriate for the committee to have decision-making power; and
- Make arrangements to manage potential conflicts of interest. Wide representation on the Governance Committee provides definite benefits in identifying and resolving issues, but may result in actual or potential conflicts of interest.

The Project Committee should meet at the key reporting milestones during the project. These will usually include:

- The completion of any significant procurement activity;
- The completion of major project phases and deliverables, such as design, business case development and build;
- When significant variations of cost, time or deliverables become apparent; and
- The reaching of milestones where it is prudent to reassess the viability of the project – that is, potential exit points for the project.

Depending on the degree of uncertainty in the project, these can be defined as either a point where specific approval is required to continue, or where approval to continue is granted subject to defined benchmarks having been achieved. For example, when a business case is developed or a Development Application response is received.

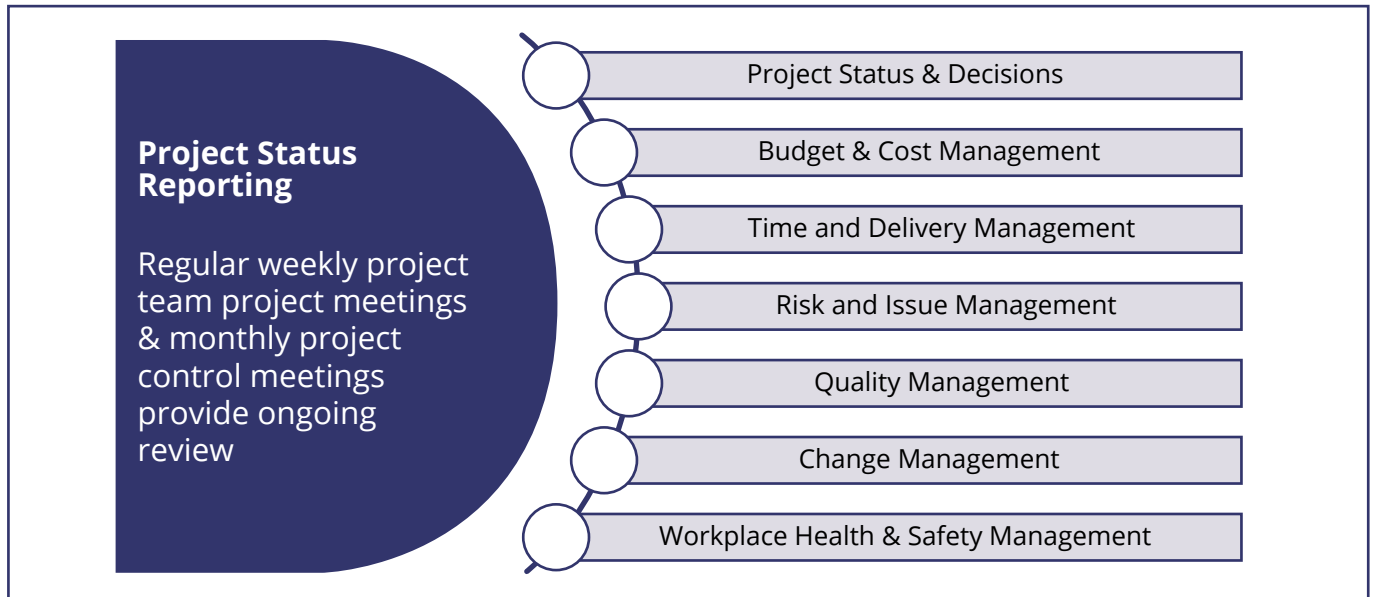
## **Project monitoring and reporting**

Monitoring a project is important across the life of a project. As a project evolves changes may need to be implemented, and therefore ongoing review and monitoring should be undertaken to ensure that management is sufficiently informed of the current and emerging risks and issues.

Generally, a Project Committee should meet monthly and the person managing the project should report on:

- Project objects and expectations against actual project outcomes and benefits;
- Time, Cost, Quality and Project Budget updates;
- Issue and Risk Management updates and associated action logs;
- Change requests in the project, external to the project that affect the project, or as a result of the project moving from one stage to another; and
- Knowledge sharing, project deliverables review, acceptance and approvals.





Typical project status reports include updates on:

- Key decisions (including approvals) and actions from previous meetings / status reports;
- Project progress, including status of design and construction activities compared to design and/ or construction programs;
- Work undertaken in the report period;
- Work planned but not undertaken in the report period and the action being taken to rectify;
- Work planned to be undertaken in the next report period;
- Planning, building regulations, EPA consents (if required) and fire officer consents;
- Project master program (updated);
- Tendering report including status report on sub-contracts;
- Inspections, testing, samples, mock-ups and acceptance;
- Change requests made by the Principal;
- Change requests made by the Service Provider(s);
- Financial reports, incorporating status and cash flow projections for the project and availability of funds statement;
- Risk and issues report; and
- Health and safety report, insurances, compliance and obligations.

## Quality management and project records

Quality management and records for the project should include:

- Procurement plans, tender documentation and contracts;

- Project management plans;
- Project briefs;
- Project status reports;
- Quality review reports;
- Design reports and supporting documentation including certification and approvals documentation; and
- Construction reports and documentation including certification, approvals documentation, defects reports, completion reports, warranties and guarantees.

## Preparing a business plan for the full life of the project

An effective business plan should make provisions to evaluate the acquisition and asset management plan for the proposed project facility(s) and should also include a risk assessment that potential future events may have on the outcomes of the costs.

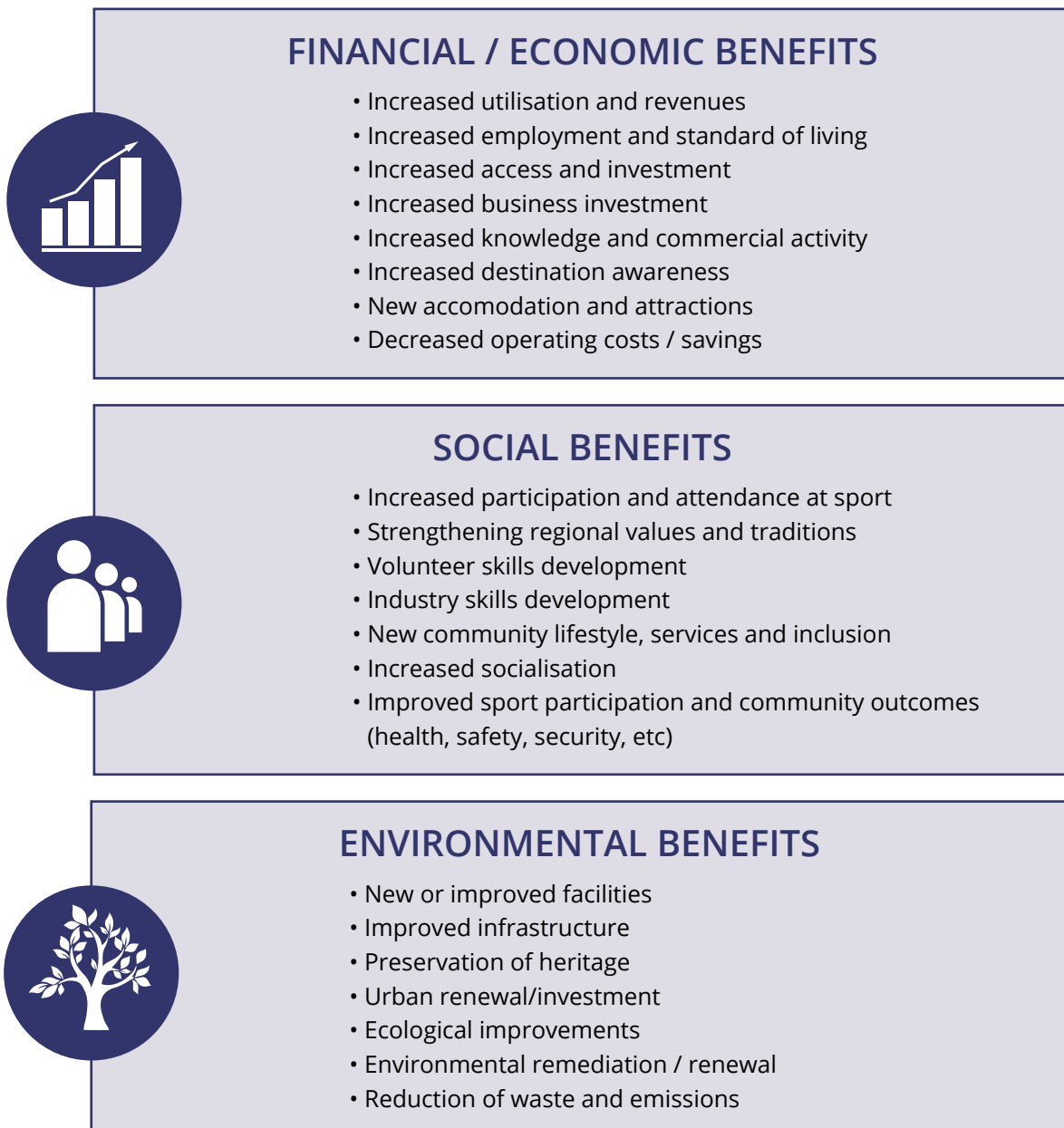
This will include the evaluation of the alternatives to acquiring a new asset and the replacement of an existing asset and should generally include:

- The basis for the improvement, the identified benefits it will provide and how these will be optimised for all the respective stakeholders and users of the facility. Sometimes you may need to identify these in various categories of benefits being Financial/Economic, Social or Environmental benefits.
- Community need, demand and accessibility.
- Assessment of the proximity and access to other existing or proposed venues that could meet the needs.
- An impact assessment of open spaces and amenities (these may include Environmental Impact Statements and Heritage Impact Statements which may be required to support your Development Application).



- A comparison of life-cycle costs and asset management requirements.
- Investment options to fund the development.
- The rationale for acquiring, upgrading or replacing an asset and its alternatives.
- Level of investment and the commitment to invest (Council/Association/Community/ School/ Owner, etc.).
- Identify potential delivery issues and risks and provide a management plan for these.
- In some cases, you may need to provide Cost Benefit Analysis and these are best developed by an experienced consultant who can provide the necessary financial and economic assessments that may be required.

Types of benefits that a project may attract:





## Developing budgets including budget contingency

Defining a realistic budget for the proposed facility(s) project is critical to ensure its successful delivery and is also required to assess funding considerations for the project.

The types of costs that should be considered include:

- Materials costs;
- Consultancy and design costs;
- Construction labour costs;
- Project management costs;
- Site management costs;
- Insurances;
- Capital replacement and lifecycle costs associated with your project; and
- Allowance for cost escalations and contingencies.

It is important to note that from the time you commence planning your project to 'turning soil', Contractors will expect to be paid as they complete various stages of work. You will need to ensure that club or partner funding is available to make the required payment upon the satisfactory completion of work.

The short and long-term feasibility of all projects should be assessed. Lifecycle costs for key facility components should be considered in addition to the initial capital investment required and revenues and or funding opportunities that your project may attract.



For larger scale projects, such as the development of a regional sports training centre, this will generally be led by the facility owner and development should be discussed and agreed.

Agreement of the roles of the Council, Association and/or Club in the replacement of the facility, including sinking fund contributions and/or future revenues that can be expected, should also be identified.

Costs should be developed in conjunction with building cost planners and product suppliers, and by referring to the Football NSW Technical Guidelines to determine the development costs, lifespan and expected performance of the planned assets.

The feasibility of a project may be enhanced by including a range of activities to meet community needs. Associations, Clubs and facility operators should also be aware that as a facility grows, so will the requirements for management, administration and maintenance of the facility. These considerations should be factored into future operational budgeting.

Note: If your project planning spans a number of years it is likely that the cost of construction and materials will increase and managing your project cash flow will be important to your success.

## Whole of life costs and asset management

A comparison of Whole of Life (WOL) costs and asset management requirements should enable the assessment of:

- Future resource requirements (budgeting);
- Comparative costs of potential acquisitions (investment appraisal);
- Comparison between sources of supply (source selection);
- Comparison of resources used now or in the past (reporting and auditing);
- Improved design (system or facility);
- Optimised operational support; and
- When assets need refurbishment and/or when they reach the end of their economic life and replacement is required (disposal).

When planning the acquisition of a major asset an economic evaluation of both direct and indirect costs, where the initial (capital) cost and future costs (operating expenses), should be undertaken.

### **Initial (capital) costs include:**

- Required size or capacity of the item;
- Operating performance requirements;
- Physical appearance or image projected; and
- Capital cost; and alternative options.

### **Future costs (operating expenses) include:**

- Operational expenses, including labour, equipment, insurances and overhead charges. Major plant with complex operational processes will require expert personnel and significant supporting infrastructure;

- Utilities and Consumables, such as power, fuel, water, toner and ink;
- Maintenance, Minor Repairs and Service Fees, including labour, parts, materials and overhead charges to maintain the asset at the desired condition and performance level. These maintenance costs may arise through in-house resources or by the engagement of external contractors;
- Upgrade and Renewal, including major repairs, refurbishment, renewals and overhauls to extend the life of the asset or equipment; and
- Disposal, including costs associated with selling, demolishing and safely disposing the remnants of the asset.

The scale of these costs depends on the level and frequency of usage of the asset.

When the assessment is complete a series of ratios that help to support the development decision should be identified and these include:

- Number of Years to breakeven on the Capital Costs;
- Cost of the capital expressed as rate of \$ / m<sup>2</sup>;
- Cost of maintenance expressed as rate of \$ / m<sup>2</sup> over the life of the project;
- Maintenance cost as a proportion (%) of the replacement cost;
- Reduced / Increased direct workforce numbers as (Full-Time Equivalent) FTE;
- Energy cost/consumption / m<sup>2</sup>;
- Management Fees as a % of maintenance and capital costs; and
- Any Expenditure reports compared YTD to Budget.

Cost details should be obtained by consulting with building cost planners and product suppliers, and by referring to the Football NSW Technical Guidelines to determine realistic lifespan and expected performance of assets.

## Developing and maintaining a risk register

Risk identification and management is required to successfully deliver a facilities development project for the following reasons:

- Good governance and financial stability;
- Improve communication (both internal and external) ;
- Improve decision making processes including the involvement of the community;
- To ensure the project team understand and accept their responsibilities in risk management;
- Provide better sporting outcomes, safer environments for participants, officials, spectators and volunteers;
- Increase support and funding opportunities for the project;
- To preserve and enhance quality facilities, heritage and environment outcomes and to improve the quality of life for residents and users of the facilities;



- To improve the efficiency and effectiveness of facilities and meet compliance obligations; and
- To maintain and enhance the infrastructure and other facilities for the benefit of residents and tourists within the area.

The following few stages apply:

**Risk Identification** – a combination of brainstorming and reviewing of standard risk lists are undertaken and are assessed for their impact to the project relevant to the phase of the project. At this stage a risk will be defined by its cause, such as a supplier not meeting deadlines, and then understanding the impact on cost and operations.

**Risk Assessment** – Once identified the risk will be assessed and rated by its impact (time, cost, media profile) and the likelihood that its treatment will be prioritised and the level of management by the project team or business team.

**Risk Mitigation and Response** - The three main approaches for risk control include the development of a mitigation and response strategy with detailed actions that identify what needs to be done, who is doing it, and when it should be completed. Methods of controlling risks may include:

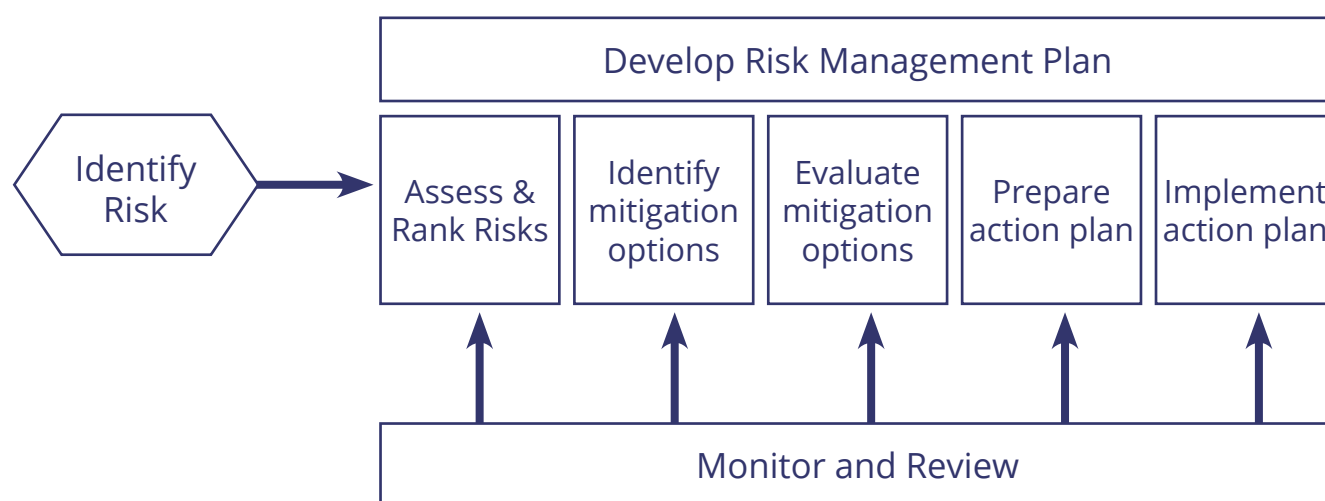
- **Avoiding the risk.** Do something to remove it. E.g. modify the design to eliminate the risk, or use another supplier.



- **Mitigating the risk.** Take actions to lessen the impact or chance of the risk occurring.
- **Accepting the risk.** The risk might be so small the effort to do anything is not worthwhile.

**Risk Monitoring and Control** - project and operational risks are continually monitored via a risk register to identify any change in the status or severity. Regular risk reviews will be undertaken during the project phases and as a part of event operations to identify actions outstanding, assess risk probability and impact, and identify new risks.

The process for managing risks is summarised in the diagram below:



Proposed risk treatments are incorporated into the Project Risk Register, together with the organisation and individual/s responsible for undertaking the actions.

## Risk Register, Treatment Summary and Implementation Plan

Risk management should be a standing agenda item at project meetings to ensure that the Project Risk Registers are updated to:

- Reflect the status of risk treatments;
- Include new risks identified during the period;
- Include proposed or implemented controls;
- Allocate responsibilities for implementing risk management actions;
- Include risk events that have occurred and actions taken in response;
- Remove risks previously identified that no longer pose a threat to the project; and
- The status of high-ranked risks is identified.

## Monitoring Risk

The Project Manager should maintain regular surveillance of the preconditions (triggers) for:

- The occurrence of risk events, particularly those on the watch list; and

- Circumstances suggesting the need to re-evaluate risk impacts (inherent and residual risks) and initiate new risk treatments.

The project team will need to ensure that specific responsibilities are allocated to:

- Monitor these triggers (that is, to develop a 'watch list' of trigger events), with responsibilities for monitoring each trigger event;
- Re-evaluate the risk and escalate the issue when appropriate.

## Reporting Risk

Project Status Reports should contain a section on risk management addressing the following:

- Status of actions required to give effect to the planned mitigations;
- Any project risk-related correspondence or discussions, and their status and outcomes;
- Any changes in personnel or responsibilities with respect to risk management;
- Reference to the current project risk register;
- Assurance activities, status/progress and outcomes;
- Monitoring activities and results; and
- Actions undertaken as a result of surveillance.

## Risk Register Definitions

A project risk register should be reviewed each month to ensure that the risk register and the nominated risk treatments are current and remain valid and relevant over time.

Resulting actions may include:

- Changed responsibilities, activities or management tactics; and
- Updates to the risk register and changes to risk ratings.

The headings used for 'likelihood' or chance of occurrence in the risk register should include:

- Common
- Likely
- Moderate
- Unlikely
- Rare.

The headings used for 'impact' or consequence of occurrence in the risk register should be:

- Catastrophic
- Major
- Moderate
- Minor
- Insignificant.

The impact definition should be agreed with the Project Committee and be used as a guide to assist people to rate risk. For example:



Severity of the risk impact	Effort to resolve (time)	Cost Impact	WHS
<b>Insignificant</b>	1 day - 2 days	< \$1K	Incident with no treatment
<b>Minor</b>	3 days - 1 week	\$1k to \$10k	Incident with minor treatment
<b>Moderate</b>	1 week - 1 month	\$20-100k	<1 week lost due to incident
<b>Major</b>	1 month - 3 months	\$100K - \$500K	> 1 week lost or serious injury
<b>Catastrophic</b>	3 months +	< \$500K +	Serious injury or worse occurs

When combined the likelihood and consequence provides a visual matrix of the resultant risk rating for each individual risk in the risk register.

LIKELIHOOD	CONSEQUENCES				
	Insignificant	Minor	Moderate	Major	Catastrophic
Common	High	High	Extreme	Extreme	Extreme
Likely	Moderate	High	High	Extreme	Extreme
Moderate	Low	Moderate	Moderate	Extreme	Extreme
Unlikely	Low	Low	Moderate	High	Extreme
Rare	Low	Low	Moderate	High	High

A sample of a risk register is provided for reference below:

Design/ Operational AREA Identifying Risk	ID	RISK	Design/ Operational AREA to Manage Risk	INHERENT RISK			CONTROLS /mitigating actions  (Preventative and reactive control measures)	RESIDUAL RISK Risk rating post mitigation				
				IMPACT				Control Rating	Control Owner	LIKELIHOOD	IMPACT	RISK LEVEL
				LIKELIHOOD	IMPACT	RISK LEVEL						
Project Mgt	2	<b>Design Approval Process:</b> Is adhoc and not formally coordinated and centrally managed and become delayed and put order cut off dates at risk.	Project Mgt	Likely	Moderate	High	Advised to PMO - formal process to be implemented and managed by the Project manager.	Adequate	Robert Cassidy	Moderate	Moderate	Moderate
Project Mgt	3	<b>Stakeholder Integration of Services:</b> Provider services are not clarified and reticulation requirements (such as third party supplied electrical, power, rigging/structures, FFE, etc) are not identified and result in redesign, missed requirements and time delays during installation. E.g Platform installation times for completion and access for installation.	Project Mgt	Likely	Major	Extreme	Advised to PMO - formal process to be implemented and managed by the Project manager.	Adequate	Sharon Markut	Moderate	Moderate	Moderate
Stamford Marquee - Westfield Damper	1	<b>Sound within Room:</b> No AV required or taken into account in design process management of sound reflection, feedback and room echo not included in design consideration as requirement was unknown.	Design/Operational Area	Moderate	Moderate	Moderate	Review technical requirements with technical expert - need to have the platform carpeted & walls acoustically treated to absorb the sound. Determined currently not in scope and budget impact in order of \$25K TBC with PMO out of contingency.	Optimal	Matthew Desprez	Moderate	Moderate	Moderate

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## Key Australian Contacts

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