



# Project Definition

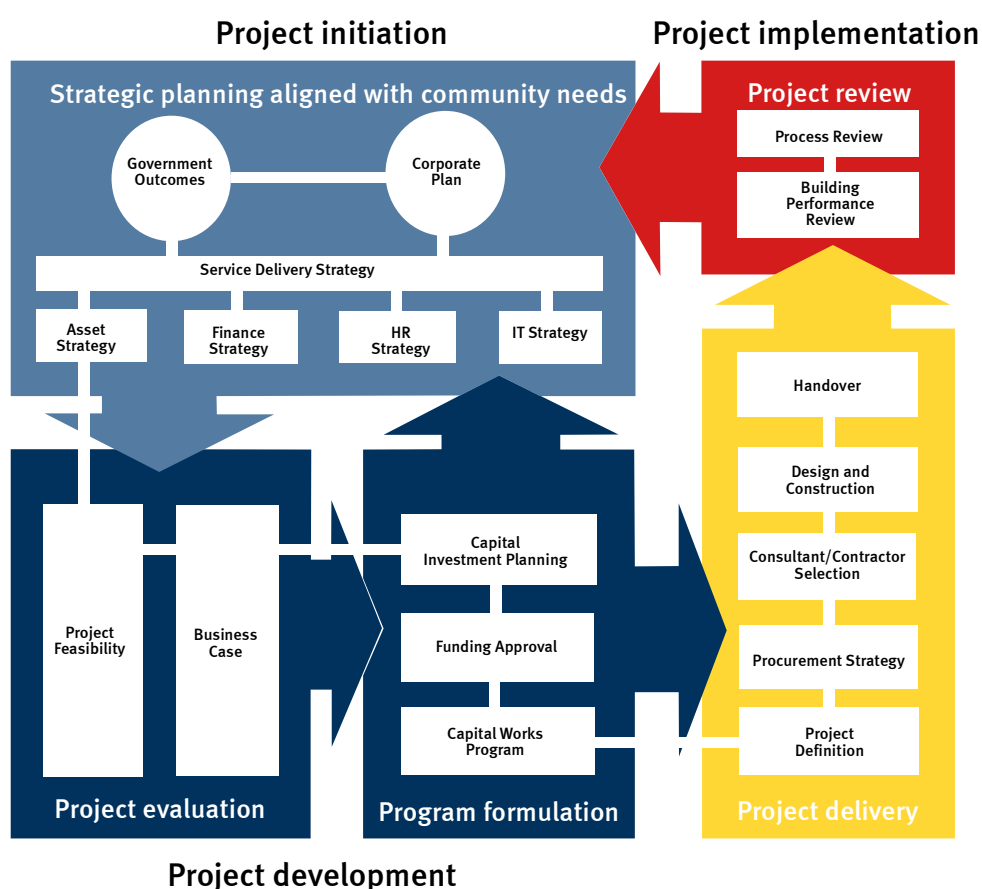
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## 1.0 Introduction

This guideline forms part of the *Capital Works Management Framework* (CWMF). The CWMF is a whole-of-government policy framework for the initiation, development and implementation of building projects. It supports the Queensland Government's model for strategic management, *Managing for Outcomes*.

The CWMF capital works management process, illustrated in Diagram 1, is a generic process that assists in adopting a strategic asset management approach for building projects. Its objective is to achieve consistency in the application of best practice within the operating environment of government.



**Diagram 1 - Capital works management process**

Project development within the capital works management process encompasses the development of:

- business cases for individual projects in the project evaluation phase; and
- capital works programs, for which allocations have been made in the State Budget, in the program formulation phase.

Business cases form the basis for which building project proposals are further developed in the project definition stage during project implementation. This involves undertaking pre-design studies as may be required for the preparation of project briefs.

This guideline focuses on the project definition stage and, in particular, on the preparation of a project brief produced as a result of the project definition process. It also provides an outline of pre-design studies and accommodation guidelines and their context in the project definition stage.

## **1.1 Objective**

The objective of this guideline is to provide best practice guidance to improve the ability of government departments to undertake the project definition stage of project delivery.

## **1.2 Competencies and resources required**

The competencies required to undertake the project definition phase of project delivery comprise a range of skills, including those for:

- facilitation and negotiation
- needs analysis
- project management
- project development, and
- value management.

The undertaking of pre-design studies and the preparation of project briefs and accommodation guidelines requires a high level of technical and professional expertise. Should departments need to engage consultants in the process for project definition, consultants would need to be pre-qualified and selected from the Pre-qualification (PQC) System, as required by government policy.

## **1.3 Scope**

This guideline focuses on the project definition stage of the capital works management process and, in particular, on the development of a project brief. It also provides an outline of pre-design studies and accommodation guidelines and their context in the project definition stage.

The scope of pre-design studies required in the project definition stage will depend on the size, nature and complexity of the project and the extent of any studies undertaken earlier. Accommodation guidelines should be developed at a portfolio level where there is a departmental need to ensure that new and refurbished facilities are designed and constructed to particular standards or layouts. The project brief produced as a result of the project definition process provides project managers and design teams with detailed information that can be translated into successful building designs.

## 1.4 Related documents

Related guidelines and policies include:

- *Capital Works Management Framework*, Department of Public Works, 2000;
- CWMF guideline, *Business Case Development*, Department of Public Works, 2001;
- CWMF practice note, *Local Content in building projects*, Department of Public Works, 2001;
- CWMF practice note, *Local Industry Policy implementation for building projects*, Department of Public Works, 2001;
- *Strategic Asset Management, Best Practice Guidelines*:
  - *Value Management*, Department of Public Works, 2000; and
  - *Management of Projects*, Department of Public Works, 2000;
- *Capital Investment Strategic Plan Guidelines*, Queensland Treasury, 2000; and
- *State Purchasing Policy*, Department of Public Works, 2000<sup>1</sup>.

## 2.0 Project definition

Project definition is the first stage of the process for implementation of building projects that have progressed through the project initiation and development phases of the capital works management process. When a project proposal is incorporated in a department's capital works program and a budget allocation has been made in the State Budget, the building proposal is further developed in the project definition stage.

Activities involved in the project initiation, development and implementation phases of the capital works management process should be integrated with individual departments' management systems. The Queensland Government's model for strategic management, *Managing for Outcomes*, provides an integrated approach to planning, budgeting and performance management. Resource and operational strategies should be further developed and documented in conjunction with the development of the project brief in the project definition stage.<sup>2</sup>

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1 A department's purchasing procedures may establish particular requirements for accommodation guidelines and project briefs

2 Documentation of resource and operational strategies at this stage should consolidate the operational management functions of buildings and include operational, asset management, human resource management and finance (including recurrent cost) strategies. This documentation should also include information technology and equipment strategies as appropriate. These strategies establish the methodology for building management and provide a framework for planning the ongoing delivery of services from the asset.

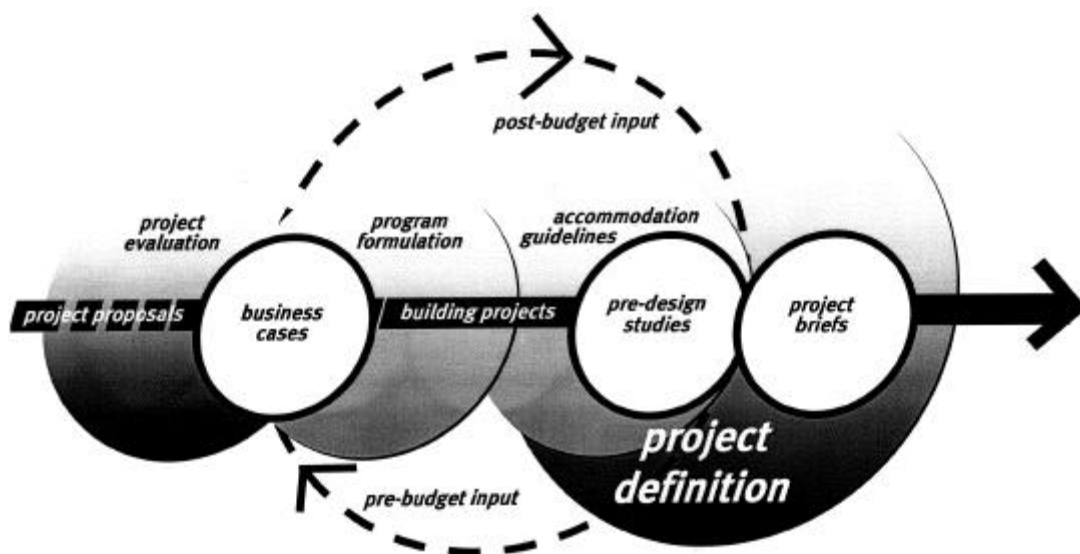
Activities involved in the project definition stage encompass:

- undertaking of pre-design studies; and
- preparation of the project brief.

Departments may need to commission pre-design studies to adequately define a project. The project brief developed in the project definition stage details client needs and requirements and establishes the appropriate standard for the design. At a portfolio level, accommodation guidelines may be developed to establish a department's generic standards and specific building requirements.

The project definition stage concludes with the completion of a project brief that provides project managers and design teams with detailed information that can be translated into successful building designs for further development in the project delivery phase.

Business cases undertaken for building projects in the project evaluation phase of project development, pre-design studies and relevant accommodation guidelines are key elements which form the basis for development of project briefs. The context of these elements within the capital works management process is illustrated in Diagram 2.



**Diagram 2 - Context of business cases, pre-design studies and accommodation guidelines within the capital works management process**

The objectives and scope of a project, as well as design and performance aspects incorporated in a project brief, should be endorsed at appropriate departmental management levels prior to implementation of the design and construction stage.

## 2.1 Pre-design studies

The scope of pre-design studies undertaken in the project definition stage will depend on the size, nature and complexity of the project and the extent of any studies undertaken earlier at a strategic level in the project evaluation phase. Where appropriate, some studies may be deferred to the design and construction stage. Pre-design studies may include:

- legislative and policy requirements including, inter alia, investigation of:
  - the *Integrated Planning Act 1997* - which is the principle legislation governing development in Queensland and seeks to achieve ecological sustainability by managing the development process and the effects on the environment;
  - the *Building Act 1975* and the *Standard Building Regulation 1993* (incorporating the *Building Code of Australia*) - which is the principle legislation relating specifically to building projects. The CWMF guideline, *Building Code Requirements* provides guidance to departments in relation to building code requirements;
  - the *Environmental Protection Act 1994* - which is the legislation that protects the environment while allowing for development in a way that maintains ecological sustainability;
  - the *State Development and Public Works Organisation Act 1971* - which places the responsibility on each department to consider environmental factors when undertaking project works. Development proposed by or on behalf of the State will require an environmental impact statement if it is declared by the Coordinator-General as a significant project pursuant to this Act;
  - the *State Purchasing Policy 2000* - establishing a structured and considered approach to purchasing. A department's purchasing procedures may establish particular requirements, for example, for local content when planning for significant building projects. The CWMF practice note *Local Content in building projects* outlines the requirements for local content in building projects and provides advice to departments to achieve objectives of government policies and priorities;
  - the *Local Industry Policy* - which contains particular requirements for local industry participation on building projects that are public sector funded and over \$5 million, or that are of regional or strategic significance and may require local industry participation plans. For further details, refer to the CWMF practice note *Local Industry Policy implementation for building projects*;
  - the *Copyright Amendment (Moral Rights) Act 2000* - where projects involve existing buildings for which a change, relocation, demolition or destruction is proposed, departments must follow procedures described in this Act. Particular requirements also relate to artwork contained in, fixed to, or forming part of a building; and
  - the *Environmental Protection (Waste Management) Policy 2000* - which may require implementation of specific initiatives to comply with waste management plans developed pursuant to this Act;

- architectural aspects including, inter alia, investigations of:
  - regulatory requirements - which may have significant implications, such as:
    - town planning schemes; and
    - the *Anti-Discrimination Act 1991* (particularly relating to equity of access provisions);
  - site and location considerations - such as further assessment of impacts or development of disaster mitigation strategies including preventative measures to safeguard or minimize the impact on or of all new building projects with respect to local requirements as may have been identified in the project evaluation phase;
  - master planning requirements - to establish a logical framework for future development, particularly where there are a number of existing or proposed buildings on a site, such as a school or hospital complex or where there are particular site constraints or requirements for mitigation of environmental or social impacts;
  - general design philosophies - such as interpretation of the department's aspirations for the building's aesthetic and image characteristics, how it relates to the public and private domains of the community and integration of art and design (including implementation of the *Art Built-in* policy);
  - requirements of accommodation guidelines such as whole-of-government or departmental design policies, generic accommodation requirements and specific needs for particular types of building projects. Section 4, *Accommodation guidelines*, outlines the nature and context of accommodation guidelines; and
  - other aspects - such as landscape considerations, vehicular and pedestrian movement, climatic considerations, acoustics, materials and finishes, security, construction feasibility and staging;
- civil engineering aspects including, inter alia, investigations of:
  - contour and detail surveys, soils (including site contamination issues) and civil engineering services - such as water supply and sewerage (including headworks and water quality control aspects), drainage, earthworks, reclamation and roadworks; and
- structural engineering aspects including, inter alia, investigations of:
  - water tables, coastal erosion, landslides, reactive soils, terrain categories, cyclone construction, supply and suitability of materials, aggressive environments, flooding, geological faults, subsidence, chemically aggressive soils, unusual loadings, such as storm surges and serviceability;

- electrical engineering aspects including, inter alia, investigations of:
  - supply - including local supply source options, physical proximity, technical requirements and life cycle costs;
  - distribution - identifying any major issues such as economic aspects including possibility of central energy plant and life cycle costs;
  - emergency and standby power - including consideration of mandatory provisions for evacuation purposes and provisions for other installations such as computer rooms, operating theatres, refrigeration, security and specialised communication systems; and
  - general requirements - relating to lighting and power, such as application of solar energy or other energy saving initiatives to achieve ecological sustainability, communications, security systems, lifts and escalators and fire detection requirements; and
- mechanical engineering aspects including, inter alia, investigations of:
  - internal air control - including requirements for air-conditioning, evaporative cooling or mechanical ventilation and determination of required air conditions, air control measures (including sound and vibration) and design and operational factors including life cycle considerations;
  - fire fighting services - including requirements for fire control systems and consideration of regulatory requirements;
  - industrial services - such as steam, hot water, compressed air, vacuum systems, piped gas, purified or treated water and special equipment;
  - materials handling facilities - including any pneumatic, mechanical or hydraulic systems; and
  - other services - such as catering and laundry facilities.

Value management studies may be undertaken at various points during the project. On some projects, a value management study may have been undertaken prior to the business case being finalised. The conduct of a value management study during pre-design studies and prior to the preparation of a project brief can result in improved project management and implementation outcomes by identifying innovative solutions, better options, time/cost savings and overall enhancements.



## **3.0 Project brief**

Development of a project brief should be based on the business case developed in the project evaluation phase, pre-design studies undertaken in the project definition stage or earlier and, where appropriate, accommodation guidelines. The scope of a project brief will depend on the size, nature and complexity of the project. The following contents structure has been developed to provide guidance on the content and requirements for project briefs.

Departments may choose to adopt this or another appropriate structure for documentation of a project brief.<sup>3</sup>

### **Table of contents**

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**Functional performance requirements**

**Technical and environmental performance requirements**

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**Symbolic performance requirements**

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<sup>3</sup> For other examples of project briefs, departments may refer to:

- International Standard ISO 9699:1994 (E) *Performance standards in building - Checklist for briefing*
- *Contents of brief for building design*; and
- Royal Australian Institute of Architects Practice Note, *The Design Brief 1998* AN10.03.100.

## **Introduction**

The introduction should provide a general outline of the nature and purpose of the project, and the people and organisations taking part. The introduction should include:

### **Project identity**

- the project name - including the title of the project, the location and street address and PQC service risk rating;
- an introduction and a description of the project (including ownership of land or buildings); and
- identification of the management structure, client and project team;

### **Objectives and scope of the project**

- the project objectives - describing in general terms the department's aims and requirements identified in the project evaluation phase and as documented in an approved business case. These aims and requirements will be explained and analysed in further detail in later sections of the project brief;
- the scope of the project - with further information on its scale and any cultural, historical, technical and environmental requirements; and
- a statement of the purpose of the project brief - with further description of how it will be used by relevant parties in subsequent stages of the project delivery;

### **Participants and related groups**

- the participants - providing a list of all parties taking part in the project delivery, stakeholders and a brief description of the authority, responsibility and role of each group;
- related groups - identifying other groups such as state and federal government departments, the local government authority as well as other groups and persons with special interest and their consultants; and
- a diagram - identifying each participant and stakeholder illustrating the relationships between the parties and the lines of communication.

## **Context, aims and resources**

This section should provide information on the context, aims and resources of the department and user groups. This section should include:

### **Project management**

- the overall management of the project - defining the organisational structure and process to achieve a comprehensive understanding of the needs and aims of the department; and
- a preliminary project delivery strategy - proposing a procurement method;

### **Legislative and policy requirements**

- laws, regulations, standards, codes and policies - such as the relevant town planning scheme, the *Integrated Planning Act 1997*, the *Anti-Discrimination Act 1991*, the *Art Built-in* policy as well as other relevant legislation and policies identified in pre-design studies;

### **Financial and programming aspects**

- financing - including funding sources that have been identified in the business case and capital investment plan;
- the project budget - including the projected cash flow; and
- key program dates and project timelines;

### **Background**

- earlier planning for service delivery - summarising relevant aspect of the department's corporate plan as well as development of service delivery and resource strategies previously undertaken, particularly referring to identified needs for building elements incorporated in asset strategies;
- pre-design studies - outlining the conclusions of other studies such as master planning, value management studies and engineering service reports;
- earlier decisions - describing the impact of any earlier government or departmental decisions on the project objectives and purpose;
- consultations - providing a summary of the outcomes of consultations with client and user groups, stakeholders and the public; and
- site selection - detailing earlier studies undertaken for the selection of a location and site;

## **Occupancy and use**

(This information will form a link between the service delivery strategies, as previously defined, and the design and performance requirements in the subsequent section of the project brief.)

- functional requirements - providing detailed analysis and description of individual activities and services that need to be performed to address project requirements, as defined previously in *Objectives and scope of the project* in *Introduction*, and identifying the equipment required to perform these tasks;
- special requirements - identifying particular aspects of activities that require special consideration in the design; and
- priorities - identifying potential competing requirements and establishing a basis for reconciling any issues.

## **Design and performance requirements**

This section translates the information in the previous section into specific design and performance requirements relating to physical aspects of the project site and building requirements. This information should include:

### **Location and site**

- other related works - detailing any project related work that may be required outside of the project site boundaries and other projects that need coordination (e.g. road upgrades, or development work on neighbouring sites); and
- details of any need for emergency supply of utilities in the case of failure;

### **Functional performance and requirements**

- functional spaces required in and around the building;
- minimum area requirements for each functional space;
- desired groupings and their respective functional relationships;
- quality objectives and standards to be incorporated in the design and construction;
- details of requirements relating to the site and building generally, such as physical characteristics, circulation and access, safety, environmental, communications, security, appearance, art work and operational aspects of the building (including cleaning and maintenance);
- the general planning and design principles - which may be established by a department's policies as defined in relevant accommodation guidelines; and
- space data schedules - including descriptions of functions and relationships, and planning and fitout requirements;

## **Technical and environmental performance requirements**

- health, safety and security requirements;
- heating, cooling and ventilation requirements;
- lighting and acoustic requirements;
- plumbing and electrical requirements;
- materials;
- information technology requirements - detailing the assessment of strategies for IT hardware, software, operations, networks and the impact these have on the building and its design; and
- equipment requirements - providing a detailed assessment of new and existing equipment to be accommodated and used in the building. All equipment should be identified on space data sheets (previously referred to in *Functional performance requirements* in *Design and performance requirements*);

## **Economic performance requirements**

- economic performance - relating to the performance of the built asset as an investment of resources in the building and its operation in delivering the department's services. Capital and recurrent investments as well as investments in human resources, equipment, furniture etc. should be considered in identifying applicable resources; and
- whole-of-life issues - providing further assessment of requirements relating to all recurrent costs associated with building management and maintenance for the ongoing provision of the department's services (these would include costs associated with building occupancy and operations, leasing and lease management, workplace health and safety, maintenance planning, disposal planning and ecological sustainable development);

## **Symbolic performance requirements**

- symbolic performance - describing the department's aspirations for the building's aesthetic and image characteristics and how the building relates to the public and private domains of the community. This section should include requirements for integration of art and design, particularly relating to implementation of the *Art Built-in* policy where applicable.

## 4.0 Accommodation guidelines

An accommodation guideline is a department's guide to the design policy for the construction or refurbishment of built assets and for specifying building components and services. It is a master document that describes the department's generic accommodation requirements and specific building needs.

Accommodation guidelines should be developed at a portfolio level where there is a departmental need to ensure that new and refurbished facilities are designed and constructed to particular standards or layouts.

Accommodation guidelines are part of a continuous improvement process where design improvements incorporated in one building design can be incorporated in future designs by reflecting this in a department's accommodation guidelines. Accommodation guidelines provide a valuable basis for departments to achieve consistency in design and value for money in their capital investments.

Accommodation guidelines should include:

- an introductory statement outlining the document's purpose and scope, and the department's design philosophy;
- guidance on how to use the document in developing project briefs for specific projects;
- details of broad planning and design principles;
- a detailed accommodation schedule, complete with functional diagrams and individual space data sheets;
- detailed and technical information to be read in conjunction with individual space data schedules, and
- details and plans relating to typical buildings and building details.

Where capital building projects include fitout for government office accommodation, departments should refer to the current Department of Public Works *Office Fitout Guidelines* as approved for implementation by the Government Office Accommodation Committee. The Department of Public Works' *Ecologically Sustainable Office Fitout Guideline* provides a practical guide to address ecological sustainable development considerations within the scope of building fitout activity.