

Project Review

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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 departments 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.

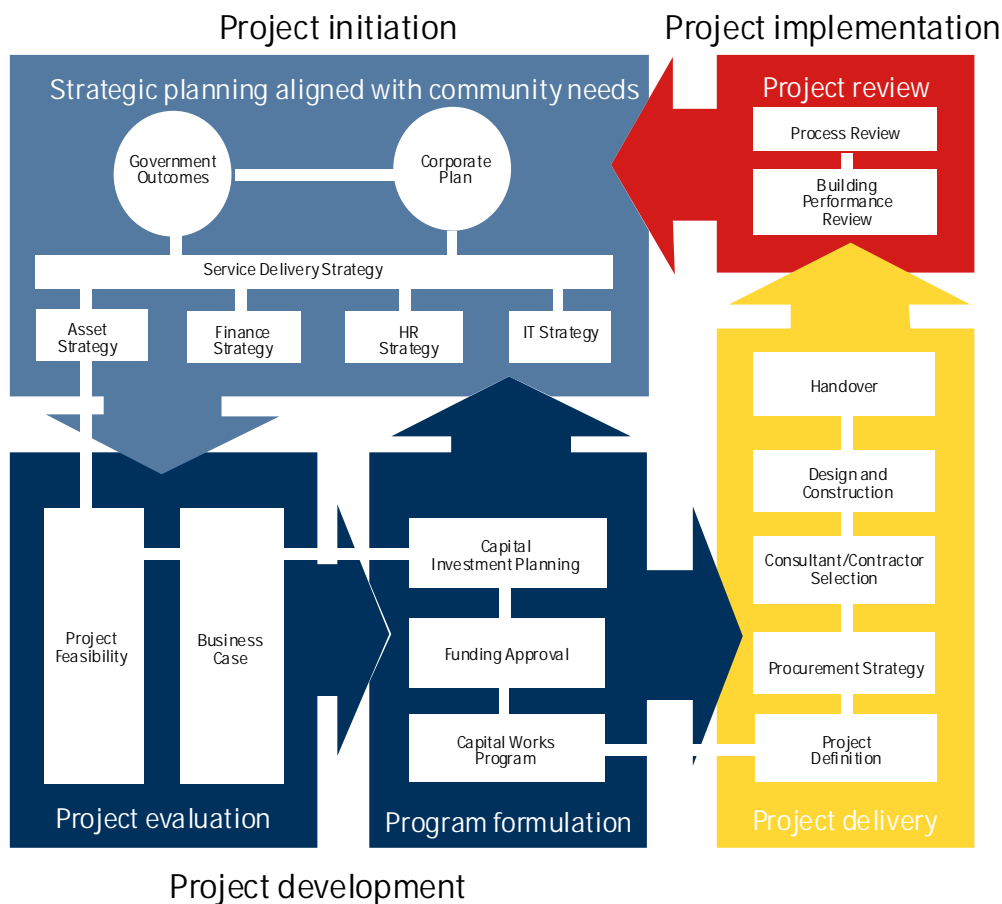


Diagram 1 - Capital works management process

Project delivery within the capital works management process encompasses the delivery of building projects that are:

- brought into use in the handover stage; and
- expected to meet the design and performance requirements established through application of the capital works management process and defined in the project brief.

Building performance and the process for initiation, development and delivery are reviewed in the project review phase.

This guideline focuses on the project review phase of the capital works management process, which encompasses:

- the building performance review stage; and
- the process review stage.

1.1 Objective

The objective of this guideline is to provide best practice guidance for government departments in undertaking the project review phase of the capital works management process.

1.2 Competencies and resources required

The competencies required for project reviews comprise a range of skills, including those for:

- facilitation;
- strategic asset management;
- value management;
- project management;
- comparative analysis and interpretation; and
- communication.

The level of technical and professional expertise required for undertaking project reviews will depend on the scope, level and complexity of review. Should departments need to engage consultants in the process for project review, consultants would need to be pre-qualified and selected from the Pre-qualification (PQC) System.

1.3 Scope

This guideline focuses on the project review phase of the capital works management process, which involves a building performance review and a process review.

Project reviews will satisfy the requirements of the *Financial Management Standard 1997* for review of completed buildings and of the *Project Evaluation Guidelines* for 'ex-post'¹ evaluations. More generally, project reviews may also be applied as part of internal control procedures relating to the initiation, development and implementation of capital building projects.

Project reviews are undertaken at a relatively early stage in the life-cycle of buildings and feed back into the capital works management process cycle. Assessment of the performance of buildings undertaken at this early stage will relate to all performance aspects such as, inter

¹ 'ex post (facto)' means acting retrospectively (of a fact). Ex-post evaluations assess what was achieved against assumptions that were made in undertaking project feasibility studies during project development, including those relating to forecast costs and benefits.

alia, economic performance (including costs for management-in-use). There is, however, an ongoing management responsibility for buildings throughout their life-cycle. Building performance reviews may be undertaken periodically throughout the life cycle of individual buildings or groups of buildings. The focus of these ongoing reviews however, will be more on required performance and changing demands rather than project objectives and design and performance requirements established in the project definition stage.

In relation to ongoing management responsibilities, the Financial Management Standard 1997 requires efficient and effective management of assets, including a review of the need for existing or additional assets and a review of maintenance strategies. Guidance relating to these review requirements is provided in:

- the Strategic Asset Management guideline, *Asset Review and Analysis*, which outlines a process for reviewing the need for existing or additional assets; and
- the Government's policy document Maintenance Management Framework, which provides a consistent approach for the planning, management and reporting of building maintenance.

1.4 Related documents

Related guidelines and policies include:

- *Capital Works Management Framework*, Department of Public Works, 2000 - which includes a policy document and related guidelines and practice notes. The Capital Works Procurement Branch, Building Division, Department of Public Works also publishes CWMF news briefs and produces CWMF tools that assist departments in application of the CWMF. All CWMF products are available on the Building Division's Internet site at www.build.qld.gov.au.
- *Maintenance Management Framework*, Department of Public Works, 2000
- *Strategic Asset Management - Best Practice Guidelines*, Department of Public Works 2000
 - *Asset Review and Analysis*, 2000
 - *Post Occupancy Evaluation*, 2000
- *Project Evaluation Guidelines*, Queensland Treasury, March 1997.

2.0 Project review

Project review is a strategic phase in the processes for initiation, development and implementation of capital building projects and for management of building performance.

Building projects are initiated to support service and output strategies identified in a department's corporate plan and service delivery strategies. These projects are procured in the project delivery phase of the capital works management process based on design and performance requirements for individual projects, which are defined in the project brief. The

project brief provides project managers and design teams with detailed information that is translated into building designs forming the basis for construction.

Building projects are brought into use in the handover stage of project delivery and are expected to meet performance requirements essential to support the department's service and output strategies.

The building performance and the process for its initiation, development and delivery are evaluated in the project review phase of the capital works management process.

The project review phase includes:

- a building performance review; and
- a process review.

The project review phase also incorporates the preparation of action plans and reporting findings and recommendations based on these reviews.

The Queensland Government's model for strategic management, *Managing for Outcomes*, provides an integrated approach to planning, budgeting and performance management. Asset management policies and procedures developed by departments for planning, budgeting and performance management should make provision for project reviews. Project reviews require consideration of the contribution of building projects to a department's service operations. To achieve this, the evaluation of resource and operational performance associated with building projects should be required in conjunction with the project review.

The primary benefits of project review are derived from the philosophy of comparative analysis as a tool for continuous improvement. The project review process, if properly applied can:

- improve understanding, judgment and decision making;
- improve accountability;
- identify ways to improve building performance and achieve best value outcomes; and
- identify ways in which future investments can be improved.

2.1 Project review process

The project review process involves three steps:

- pre-review
- review
- post-review

The sequence of activities involved in each of these steps, from deciding to conduct a project review to reviewing the effectiveness of actions implemented as a result of a project review, is illustrated in Diagram 2. These steps and related activities are aligned with those involved for post-occupancy evaluations, as described in the Strategic Asset Management guideline, *Post Occupancy Evaluation*.

2.1.1 Pre-review activities

The activities involved in the first step of the project review process include:

- **Deciding to conduct a project review**

In deciding whether to conduct a project review, consideration should be given to:

- the requirement of the *Financial Management Standard* 1997 that, when evaluating a proposed investment in a physical asset that is estimated to be \$1 million or more, provision be made for a review of completed assets to ensure the agency's needs were met, and to compare actual performance with original objectives of the asset;
- Queensland Treasury's *Project Evaluation Guidelines*, which state that a selection of major projects undertaken, as well as major on going programs which may involve a series of smaller projects, should be subject to ex-post evaluations;
- any particular provisions that are included in the relevant department's internal control procedures that may require a project review; and
- whether there is any other aspect of either a program or an individual project where a review may benefit the program or project or future programs or projects. Within this scope, the following checklist may assist in choosing programs or projects and deciding whether to undertake a project review.
 - Is the program or project of significant value in terms of the department's priorities?
 - Is it innovative?
 - Is it sensitive in terms of contextual issues, such as Government priorities, community expectations, change management, public relations?
 - Is there a high level of risk exposure, such as may arise from complexity or legal sensitivity?
 - Does it involve management or mitigation of significant social or environmental impacts?
 - Is one project a forerunner to a number of proposed similar type projects?

- **Initiating a project review**

The officer responsible for initiating a project review will generally be established by an individual department's policies and procedures. Project reviews are generally initiated by either a building owner, a program director, an asset manager or a project director.

While there are particular requirements to consider when deciding whether to conduct a project review, they may be initiated for a number of reasons. These may include:

- feedback on the project - an assessment can be made on whether the project itself has been a success. This requires a comparison between the initial objectives, the

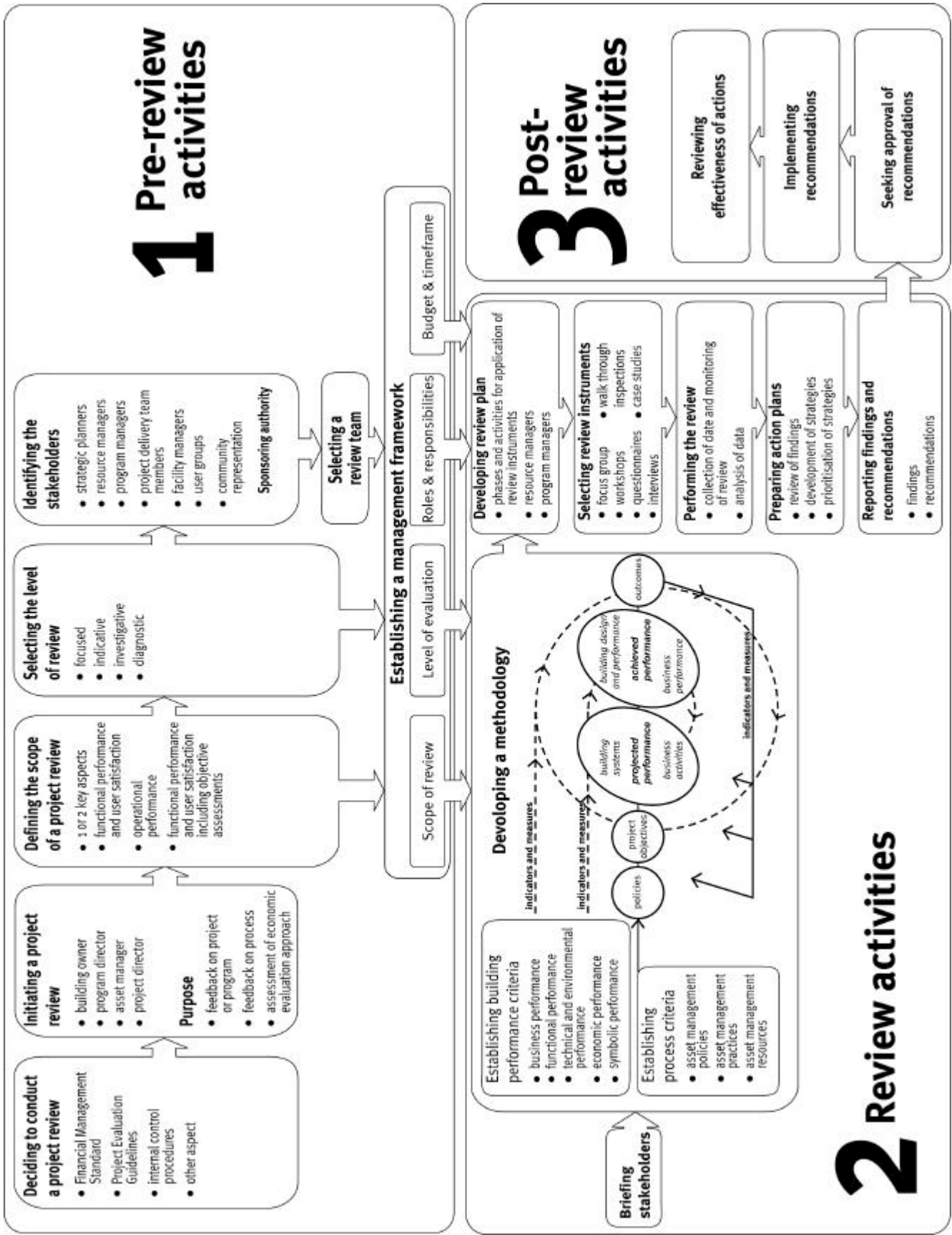


Diagram 2 - Project review process

predicted performance and the actual achievement of these objectives, and the performance of the project;

- feedback on the planning process - this assists in determining whether a synergy exists between the project achievements and the corporate goals, policies and priorities of the department. An assessment can then be made of the planning process and modifications to the planning process recommended for future projects; and
- assessment of economic evaluation approach - an economic evaluation of a project is based upon a number of assumptions of costs and benefits which may or may not be realized. An ex-post evaluation enables the ex-ante² assumptions to be reviewed and allows the experience to contribute to future capital works decisions. Where internal control procedures establish a process of review, an extra discipline is also imposed on the overall planning and evaluation process. The process for initiation will depend on an individual department's asset management policies and procedures.

- **Defining the scope of a project review**

The scope of a project review will generally involve an assessment encompassing:

- a focused review of one or two key aspects of a project which are critical to particular departmental objectives; or
- functional performance and user satisfaction with a general evaluation of the process used in the delivery of the project and an emphasis on areas where it has been established that functional performance and user satisfaction may have been compromised; or
- operational performance, functional performance and user satisfaction and an objective assessment in relation to all areas of design and performance with a full evaluation of the process used in the delivery of the project, including those aspects that have impacted on the operation, design and performance and user satisfaction.

The scope of project reviews may be tailored for individual programs or projects, particularly when there are complex and legally sensitive issues or other major problems.

- **Selecting the level of review**

The level of review required will depend on the objectives and scope established for the particular review. The classification and scope of various levels of project reviews and their application are included in Table 1.

- **Identifying the stakeholders**

In addition to the sponsoring authority and the review team members, stakeholders in the project review process include:

- strategic planners;

² 'ex-ante (facto)' means acting retrospectively (of a fact). In relation to an economic evaluation approach, ex-ante assumptions are those assumptions that are made in undertaking project feasibility studies during project development, including those relating to forecast costs and benefits.

- resource managers;
- program managers;
- project delivery team members (such as the project manager, architects, engineers, specialist consultants and contractors);
- facility managers;
- user groups; and
- community representatives.

- **Establishing a management framework**

A framework for the management of a project review should be established and documented. The framework should include:

- a clear definition of the scope and level of review;
- the roles and responsibilities of the review team and the sponsoring authority; and
- the budget and timeframe for completion of the project review.

- **Selecting a review team**

The selection and appointment of a review team should be based on the level of technical and professional expertise required.³ The composition of a review team will be determined by the scope, level and complexity of the review.

Some focused and indicative reviews may be undertaken by a single person. On the other hand, investigative reviews require particular expertise for objective assessment of a number of areas of design and performance and this may involve parties such as urban and regional planners, architects and specialist engineers. While review and feedback cannot be separated from the capital works management process, independent persons with experience in project reviews and post occupancy evaluations will assist in achieving best value outcomes.

2.1.2 Review activities

The activities involved in the second step of the project review process include:

- **Briefing stakeholders**

To encourage a fully participatory approach, stakeholders should be briefed on the project review. Apart from stakeholders identified in the pre-review activities, parties such as building supervisors, maintenance personnel and other occupants may need to be advised. It is important that parties are advised exactly what is taking place in the review, to alleviate any concerns and to maximise cooperation. The type of information provided should be managed with the objective of eliminating the possibility of participants behaving in ways that may bias results.

³ Ethical and legal implications of proposed project reviews should be considered in drafting the terms of reference that form part of the conditions of contract for consultants.

Classification and scope

A **focused** review may be used to evaluate one or two key aspects of a project. It enables critical elements to be focused upon.

An **indicative** review may be used for individual projects with a capital cost of up to \$10 million. The aspects of functional performance and user satisfaction are the major focuses for indicative evaluations. Technical and environmental performance is considered in terms of users' responses to the physical environment rather than expert assessment. Only a general evaluation of the process used in the delivery of the project is undertaken, however process issues arising from a broad level evaluation may result in a need for a detailed level focused evaluation.

An **investigative** review may be used for a selection of major projects and major ongoing programs that may involve a series of smaller building projects. An investigative evaluation is undertaken from three perspectives.

- a. the outcome managers, against the objectives to assess business performance levels.
- b. the users, to assess satisfaction and performance levels.
- c. the experts, who will make an objective assessment in relation to areas of design and performance.

A **diagnostic** review may be used where there are complex and legally sensitive issues involved.

Application

Focused reviews may be used as part of an internal control procedure to satisfy requirements for process reviews. Where the outcomes of a focused evaluation identify the need for a more detailed study, a diagnostic review may be used.

Indicative reviews will satisfy the requirements of the *Financial Management Standard 1997*, which requires that provision be made for a review of completed assets to ensure the agency's needs were met and a comparison of actual performance with original objectives of the asset.

A broad level investigative investigation will satisfy the requirements of the *Financial Management Standard 1997*, which requires that provision be made for a review of completed assets to ensure the agency's needs were met and a comparison of actual performance with original objectives of the asset.

A more detailed investigative review may be undertaken to satisfy the requirements of Queensland Treasury's *Project Evaluation Guidelines* for a selection of major projects as well as major ongoing programs which may involve a series of smaller projects, to be subject to 'ex-post' evaluations. They involve:

- a. a re-examination of the benefits and costs of the selected option to assess whether the anticipated benefits were realised and the forecast costs achieved;
- b. an assessment of the effectiveness in meeting government priorities and objectives;
- c. reconsideration of alternative options (if still applicable); and
- d. an examination of the project design and implementation to assess the scope for improvement to the adopted option.

A detailed level investigative review may also be used when either an indicative or a broader level investigative evaluation identifies a need for a more detailed study.

An investigative review should be used in preference to an indicative evaluation when dictated by the risk management approach adopted for business and building performance.

A diagnostic review may be used when there are major problems associated with a project, legal or other ramifications. In such cases, the process must be undertaken without conflicting with any legal process. A diagnostic review may also be used where the outcomes of any other level of evaluation identifies the need for a more detailed study.

Table 1 - Levels of project reviews

- **Developing a methodology**

The purpose of a methodology is to provide a framework for performing the project review. It will be necessary to initially establish appropriate criteria for the review of aspects of both the building performance and the process for its initiation, development and implementation. Indicators and measures⁴ may then be developed for relevant criteria to assess:

- the achieved performance of the building design and business activities against the projected (or required) performance of building systems and business activities; and
- the appropriateness of the process including an assessment of the project outcomes against the project objectives.

Guidance on establishing appropriate criteria and performance indicators and measures is included in 3.0 Building performance review and 4.0 Process review.

- **Developing a review plan**

Based on the approach adopted, a review plan should be developed to meet the requirements of the management framework. A review plan should include:

- phases and activities established by the methodology for the review;
- the roles and responsibilities of the parties involved; and
- time and resource schedules.

- **Selecting review instruments**

A range of different techniques and technological aids can be used for collecting and analyzing data when performing a project review. The scope and level of review, the size and complexity of the program or project, the time available, the cost of the review and the availability of stakeholders and target groups will influence the selection of review instruments. Typical review instruments include:

- focus groups involving a small number of relevant stakeholders for review of particular elements. The use of focus groups may be preferred for small focused reviews of key aspects allowing the group to focus on data collection and analysis relating to critical elements. Focus groups may also be preferred for particular aspects of larger project reviews in conjunction with a workshop concept;
- workshops, which may be preferred for larger project reviews. Facilitated workshops may be used for the collection and analysis of information. The adoption of a value management approach for facilitated workshops can deal systematically with all that is known about the project including underlying assumptions, givens and viewpoints, while on the other hand it can be used to facilitate analysis. Enhanced communication and networking are direct benefits of the workshop concept. These, in turn, can have a significant impact on the benefits that may be derived from project reviews;

⁴ 'Indicators' are developed by establishing ratios of a particular variable, such as maintenance costs, against a building attribute, such as floor area. An indicator can also be an index derived from a survey, e.g. a condition index or a user-satisfaction index. 'Measures' are a direct calculation of a particular variable, such as building value, gross floor area and remaining life.

- questionnaires for larger and investigative reviews, which provide a simple means for data collection from a representative sample of stakeholders. Survey data may be included in the questionnaires to establish indicators for particular variables (such as user satisfaction) involving assessment against a scale of positive and negative aspects (e.g. +3, +2, +1, 0, -1, -2, -3) ;
- interviews for smaller focused and indicative reviews (which may be followed by informal discussions) may be used to gather data. An indicator scale as used for questionnaires can be modified and used for structured interviews;
- walk-through inspections are an integral part of a project review. Other technological instruments, such as recording with video and other cameras and behavioral mapping may be used in conjunction with these inspections. Walk-through inspections may not be necessary for some focused or indicative reviews;
- case studies may be used for investigative reviews involving major ongoing programs that involve a series of smaller building projects. This allows for individual buildings to be treated as individual elements within the framework of the review as a whole and can be useful for comparative assessment.

- **Performing the review**

The review should be undertaken in accordance with the methodology and review plan developed earlier. The purpose and focus of building performance and process reviews are outlined in sections 3.0 *Building performance review* and 4.0 *Process Review* respectively. The following activities are involved in performing the review.

- Collecting the data and monitoring the review. The team members should understand the interdependencies of the elements of the review and become accustomed with the building and its operation before data collection is commenced. A review of as-built drawings and other relevant data will assist in this process. The main activities involve the application of the review instruments selected (such as focus groups, workshops, questionnaires, interviews, walk through inspections and case studies) in accordance with the predetermined methodology. The period for performing the review will allow the review team to check dependencies of criteria established in the methodology and to document the process as it is applied. The outcomes of this stage will be indicators and measures of performance of the building and the process for its initiation, development and implementation.
- Analysing the data, which involves analysis and interpretation of the indicators and measures of performance (that are outcomes of the data collection process) and the drawing of conclusions. The data analysis may identify positive and negative aspects of the building in use and may require further analysis of particular aspects of the process that have impacted on the performance of the building. The outcomes of this stage will be particular findings relating to how a building is performing and to the process for its initiation, development and implementation.

⁵ The Strategic Asset Management guideline, Value Management, provides detailed guidance for undertaking value management workshop

- **Preparing action plans**

A review of the findings with relevant stakeholders and development of strategies can be used to address impacts of the findings. The outcomes of this stage are prioritised strategies incorporated in action plans relating to the particular program or project and to future application of the capital works management process through a department's policies and practices.

- **Reporting findings and recommendations**

The findings and recommendations should be documented in a project review report. The recommendations, particularly relating to proposed action plans, provide important inputs into strategic management processes as they relate to assessment of planned and actual outcomes as well as appropriateness of processes. The results also assist in making asset management decisions over the life of a building to maximise the benefits of investment. The format for a project review report will depend on the scope and level of the post-occupancy evaluation. The format for a focused review may be as simple as the incorporation of findings and recommendations in a letter and, on the other hand, an investigative review will require comprehensive documentation in a structured report.

2.1.3 Post-review activities

The activities involved in the third and final step of the project review process include:

- **Seeking approval of recommendations**

- the recommendations included in a project review report should be endorsed at appropriate departmental management levels prior to implementation and review of their effectiveness.

- **Implementing recommendations**

The actions arising from recommendations included in a project review report may relate to:

- design and performance of the building system;
- performance of business activities; and
- policies, practices and resources for initiation, development and implementation of the project.

- **Reviewing effectiveness of actions**

The outcomes of the actions implemented should be monitored after time has been allowed for the changes to have the desired impacts on the performance.

3.0 Building performance review

Building performance reviews may be undertaken for an individual building or for a number of buildings, which may be part of a larger complex or a program of building works. The purpose of undertaking a building performance review is to provide information about the performance of a new or existing building when fully operational, i.e. after at least 12 months of occupancy.⁶

Building performance reviews focus on criteria relating to business activities and the following criteria relating to building systems, which may also impact on business activities.

- Functional performance, for which indicators and measures may be developed to assess:
 - functional spaces in and around the building;
 - space allocations and fitout;
 - space groupings and functional relationships;
 - quality and standards of the design and construction;
 - the site and building generally, including physical characteristics, circulation and access, safety, environmental, communications, security, appearance, art work and operational aspects of the building/s (including cleaning and maintenance); and
 - general planning and design.
- Technical and environmental performance, for which indicators and measures may be developed to assess:
 - health, safety and security;
 - heating and cooling;
 - lighting and acoustics;
 - plumbing and electrical provisions;
 - materials;
 - information technology provisions; and
 - equipment.
- Economic performance, for which indicators and measures may be developed to assess:
 - the performance of the building/s as an investment in resources; and

⁶ Earlier review may be undertaken in certain circumstances, such as for small buildings or for projects involving a number of stages where it may be desirable to assess the performance of initial stages prior to commencing subsequent stages. Such project reviews will not necessarily assess the true performance of a building but may provide indicators to satisfy the review objectives. Departments should therefore apply discretion in deciding on the timing for project reviews.

- whole-of-life issues, such as those relating to recurrent costs associated with building occupancy and operations, leasing and lease management, and maintenance.
- Symbolic performance, for which indicators and measures may be developed to assess:
 - the aesthetic and image characteristics of the building/s;
 - how the building/s relate/s to the private and public domains of the community; and
 - integration of art and design.

Performance indicators and measures can be used to assess the performance achieved for each criterion and to compare this with performance levels that may have been established in the project brief and that are required for the delivery of services and outputs. The review should relate to the performance of both building systems and human activities and responses.

Building performance reviews begin at the individual building level where the range of indicators and measures may be selected for review and the relevant data collected and analysed. When a building performance review is being undertaken for a number of buildings, which may be part of a larger complex or a program of building works, the review may be based on an aggregation of appropriate indicators and measures selected from the building level. Aggregation of more strategic indicators and measures (selected from reviews of individual buildings, larger complexes and programs of building works) may be used in a review of performance of a department's portfolio of buildings.

4.0 Process review

The capital works management process and application of an individual department's asset management policies, practices and resources are primary factors that impact on building performance outcomes. Process reviews commenced either before or immediately after completion of a building project may satisfy requirements of a department's internal control procedures. However, without an assessment of the impact of the process on building performance, they will not provide a view of the impact on service delivery. Integration of building performance outcomes in a process review will contribute to continuous improvement in application of the capital works management process by assisting in identification of:

- success factors contributing to enhanced building performance; and
- inhibiting factors contributing to reduced building performance.

Process reviews may be undertaken at levels similar to those for building performance reviews. They may be undertaken for individual buildings or for a number of buildings, which may be part of a larger complex or a program of building works.

The purpose of a process review is to assess the appropriateness of the process for initiation, development and implementation of building projects and to identify ways in which future investments can be improved.

Process reviews focus on criteria relating to aspects of application of asset management systems for the initiation, development and implementation of building projects. Particular criteria include:

- asset management policies, which are critical to the achievement of Government and department-specific performance objectives. Other policies unrelated to asset management, such as employment and social policies, could also have an impact on performance. Appropriateness of application of asset management policies may be assessed by indicators and measures, which may be developed for:
 - degree of compliance with the *Capital Works Management Framework* and related policies, such as the State Purchasing Policy and the Local Industry Policy;
 - existence and implementation of department specific asset management policies; and
 - alignment of asset management policies with department and Government priorities and objectives;
- asset management practices, which are one of the primary factors that impact on building performance outcomes. Appropriateness of asset management practices may be assessed by indicators and measures, which may be developed for:
 - existence of, and compliance with, documented processes;
 - alignment with best practice principles and practices;
 - integration with the department's core business processes;
 - extent of focus on achieving project objectives; and
 - compliance with the capital works management process; and
- asset management resources adequate resources with necessary skills and competencies contribute significantly to improved building project outcomes. Appropriateness of asset management resources may be assessed by process indicators and measures, which may be developed for:
 - management structure and reporting hierarchies;
 - integration of processes with core business functions;
 - project team capacity including numbers, competencies and skill mix;
 - project management cost margins, i.e. the cost of resources relative to capital value of the project;
 - integration of project team resources; and
 - defined responsibilities.

Process indicators and measures developed for each criterion can be used to assess the appropriateness of each stage of initiation, development and implementation of building projects and to identify ways in which future investments can be improved.