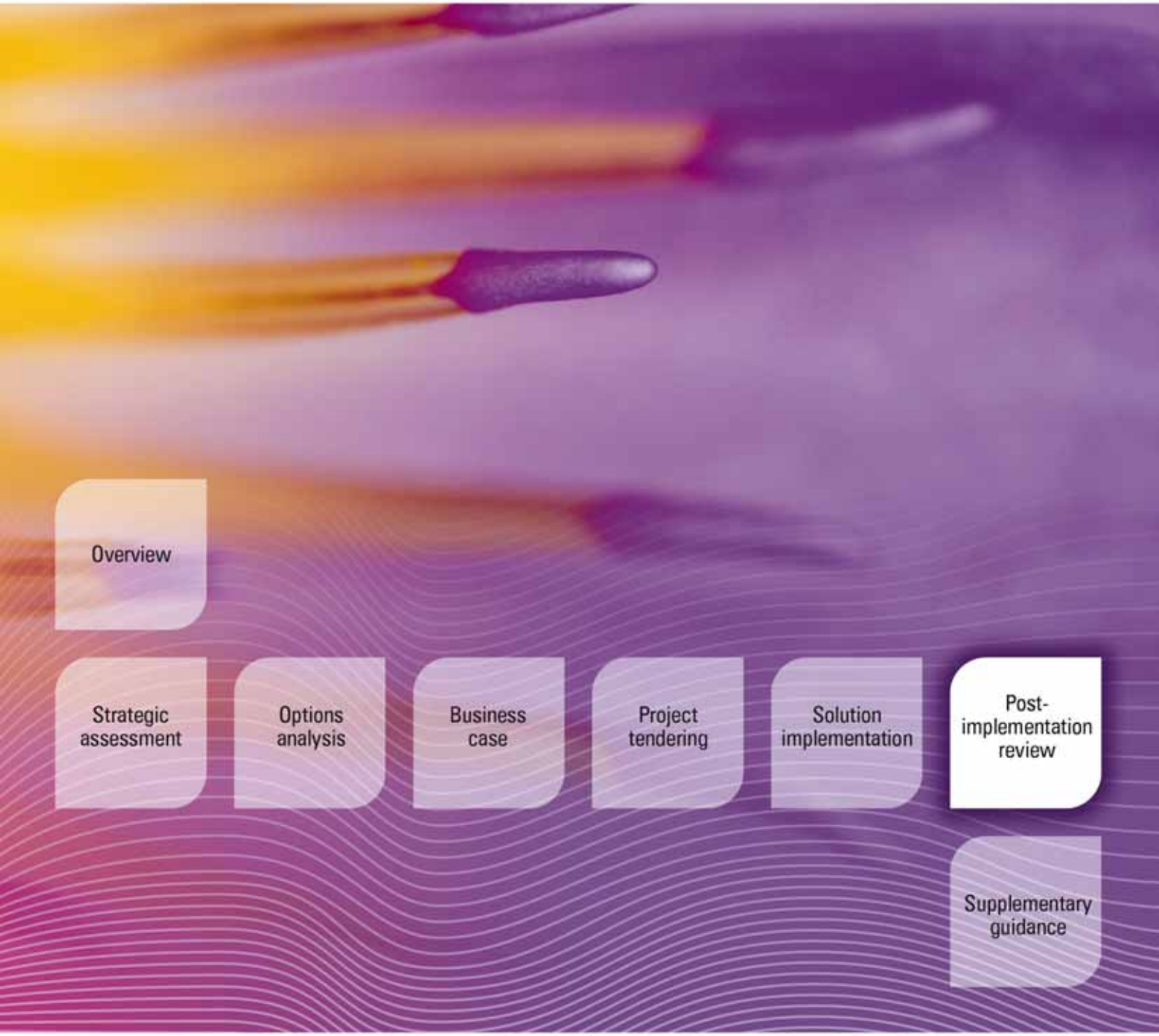
INVESTMENT LIFECYCLE GUIDELINES

Post-implementation review



Department of **Treasury & Finance**

Victoria
The Place To Be

Investment Lifecycle Guidelines

Post-implementation review

'What benefits were delivered and what were the investment lessons?'

Version 1.0

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This Post-implementation Review is part of the Investment Lifecycle Guidelines, first published in 2003 as Business Case Guidelines. The publications in the 2008 series are:
Overview
Strategic Assessment
Options Analysis
Business Case
Project Tendering
Solution Implementation
Post-implementation Review

More information at: www.lifecycleguidance.dtf.vic.gov.au

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Abbreviations

DPC	Department of Premier and Cabinet
DTF	Department of Treasury and Finance
ERC	Expenditure Review Committee
ILM	investment logic map
IT	information technology
MYS	multi year strategy
PPM	project profile model
TEI	total estimated investment

Executive summary

This guideline document gives a high-level overview of the evaluation required at the post-implementation phase of the project lifecycle. The scope and nature of the evaluation depend on the type of project. However, each evaluation will have certain elements in common. This guideline sets out these generic requirements.

Evaluations during this phase have broader objectives than other common types of project reviews – such as post-occupancy reviews (that assess whether the requirements of a construction contract have been met) and benefit realisation reviews (that assess whether the level of benefits outlined in the business case are being delivered). However, if the timing is appropriate, the evaluation should incorporate these types of reviews.

Post-implementation reviews can involve either a one-off project evaluation or ongoing monitoring and assessment after the solution implementation phase (post construction and commissioning).

Some context for the review should be clear from the benefits management plan, established when the business case was being developed. This plan links to the investment logic map and the benefits identified in the business case. It provides a way of communicating benefits as they emerge. It also assigns accountability for achieving and tracking benefits – both planned and unplanned – throughout the investment lifecycle. Broader aspects of the project's progress and ongoing relevance could also be reviewed at this stage.

An important outcome of project evaluation is to make the fullest use of the experience gained. It is important for the review to identify successful project elements, aspects to be remedied and ways of improving the management of future projects (or the next stages, if it is a multi-stage project).

The intention of the guidelines is to produce a consistent quality of project evaluation across government. They apply to all asset-related initiatives, including those delivered under *Partnerships Victoria*.[1]

The guidelines are not comprehensive. They complement departmental processes and tools. Departments and agencies are encouraged to prepare more specific guidelines where needed, and to seek advice on project-specific issues not covered in the guidelines series.

Note: The terms *evaluation* and *review* are used somewhat interchangeably in this guideline.

Evaluation conveys the concept of assessing the worth of the investment and its outcomes, while review implies looking retrospectively over the investment process to derive findings and lessons. The post-implementation review process requires both aspects.

[1] For *Partnerships Victoria* projects, the *Partnerships Victoria* Contract Management Framework provides more detailed guidance on the ongoing management of contracts.

1 Introduction

Learning from the journey and celebrating the achievements

1.1 Investment Lifecycle Guidelines – background

The Investment Lifecycle Guidelines series (the guidelines) are designed to be applied to Victorian Government investments so they provide the maximum benefit for the State's individuals, communities and businesses.

They are mandatory for major[2] investments, but can be used for any investment, whatever its type, complexity or cost.

Every investment needs to address a basic set of questions consistently and robustly. The guidelines provide practical assistance to shape investment proposals, inform decisions about them, monitor their delivery and track the benefits they achieve. They also refer to tools best suited to help at each phase of the investment lifecycle.

The guidelines have seven parts – an Overview and one document for each of the six phases in the process. Their titles and the questions they address are:

1. ***Strategic Assessment*** (What are the business needs and the likely solution?)
2. ***Options Analysis*** (Which option will provide the best solution?)
3. ***Business Case*** (Is there a compelling case for investing?)
4. ***Project Tendering*** (What is the preferred delivery option?)
5. ***Solution Implementation*** (Is the investment proceeding as planned?)
6. ***Post-implementation Review*** (What benefits were delivered and what were the investment lessons?)

Supplementary guidance includes *Procurement Strategy* and *Risk Management*.

1.2 Purpose of the guidelines

The guidelines provide standards for activities carried out at various phases of an investment. The Overview explains the whole context of the series and relevant processes. Supplementary guidance material has 'how to' details about processes and methods (available at www.lifecycleguidance.dtf.vic.gov.au).

This guideline addresses the post-implementation review, sometimes called the project evaluation phase of the investment lifecycle. This identifies the benefits attained, explores the broader impact of the investment, assesses the procurement process, captures the lessons learned and considers the forward context of the business need.

This guideline also refers to related processes and guidance material for post-implementation reviews. A resource directory is provided for web-links.

[2] To meet current government requirements, *major* has a total estimated investment (TEI) > $5 million.

2 Project evaluation and review

Key principles of the post-implementation review

- An independent review – against the original business case – of the achievement of objectives, outcomes and outputs, and the performance regarding time, budget and benefits realisation.
- Organisational learning to inform and improve future project planning and management.
- A checkpoint to decide whether and how to proceed with a multi-stage project.

2.1 Purpose

The purpose of an evaluation is to find out:

- whether the expected benefits of the project have been realised
- what lessons can be learned from the project for both the current and future projects, such as:
  - successful elements to reinforce in future processes
  - aspects of the current project requiring remedy
  - ways of improving the management of future projects.

An important outcome of project evaluation is to make the fullest use of the experience gained for managing future projects. Therefore, an evaluation should identify both successful aspects and where improvements can be made – not just for the current project but for future projects.

While the benefits of an investment may appear self-evident, an evaluation is necessary to determine the relative cost/benefit outcome. This feedback is essential for effective organisational learning about project planning, implementation and ongoing project management.

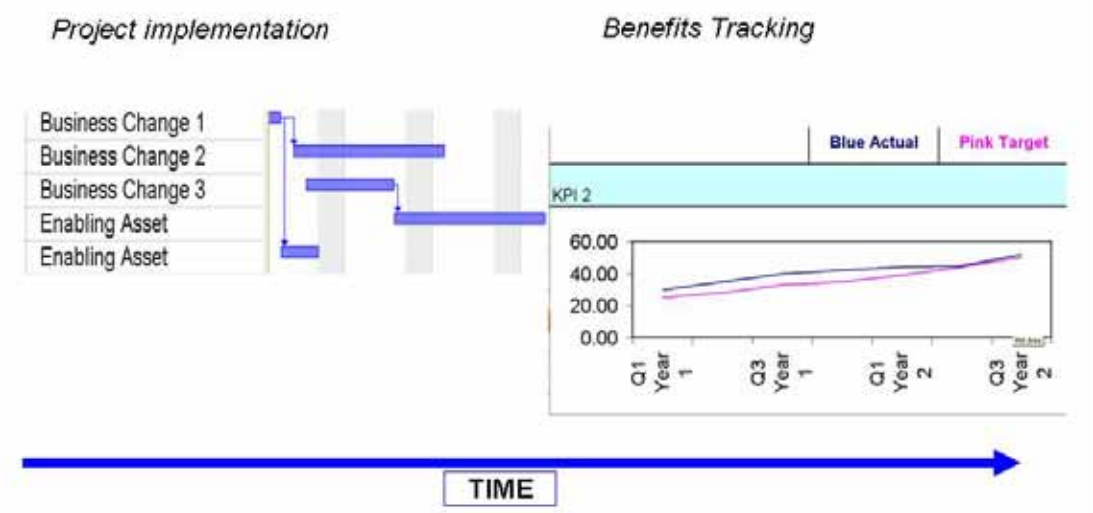
2.2 Benefits

Project evaluation is an essential tool for establishing whether the investment in the project has produced the expected level of benefits. The expected project benefits are described in the business case and more specifically in the benefit management plan. The plan may need to be updated over the life of the project, if the key assumptions on which it was based change significantly.

Benefit reporting using the benefit management plan may identify areas for the evaluation to focus on. Benefit reporting tracks the achievement of investment outcomes, using pre-established benchmarks and targets. Tracking may identify areas where the

investment is over or under-achieving, highlighting issues for note or investigation. Figure 2.1 shows how benefit tracking might look.

Figure 2.1: Benefit tracking (sample)



If the project evolves over a number of years or stages, it may need several evaluations or an ongoing evaluation process over its lifetime. These evaluations inform subsequent development stages.

The evaluation provides the responsible senior management with an objective review of a particular project. Reviews can also benefit the asset 'owner', central agencies, policy-makers, project designers, review organisations and other government agencies. For this reason, it is important, as noted earlier, to identify successful aspects of a project, as well as ways of making future projects and their implementation more effective.

Project evaluation can assess issues such as residual stakeholder concerns, as well as providing assurance to the community and government that agencies are planning, implementing and managing projects in a professional and publicly defensible way.

Investment Management Standard information and documentation, including specific guidance about the benefit management plans and benefit reporting, can be found at www.dtf.vic.gov.au/investmentmanagement.

2.3 When should a project be evaluated?

Generally, an evaluation should be conducted after enough time has elapsed to show the benefits of the new investment and its success in achieving service strategy requirements. This is usually around 12 months after the project is completed and the service had started, unless more time is needed for a reliable assessment. Ideally, the evaluation should start while key members of the project team are still available.

Where a project involves multiple stages or progressive achievement of benefits, evaluations may need to be repeated with an appropriately amended scope.

If the evaluation is held later, it should be planned and scheduled so that the responsible agency does not inadvertently forget to do it. For multi-stage projects, reviews should be carried out after each stage to inform the next.

Building projects should be evaluated after any post-occupancy review (especially related to a defects period).

Some context for the review should be clear from the benefits management plan established during the development of the business case. A benefits management plan links to the investment logic map and the benefits identified in the business case. It provides a means of communicating benefits as they emerge. It also assigns accountability for achieving and tracking benefits – both planned and unplanned – throughout the investment lifecycle. In addition, broader aspects of the project's progress and ongoing relevance could be reviewed.

2.4 Who should carry out the evaluation?

An independent, multi-disciplinary team should be established to undertake the evaluation. Usually the team would be small, but this would depend on the size and complexity of the evaluation and the investment itself. They should have the capacity to draw on their expertise to help identify and advise on technical and other issues to be reviewed. The independence of the review team is critical for objective identification and reporting of lessons learned from the project so that future projects can improve on performance.

Independence in this context means independent of the functional area not necessarily independent of the organisation although this may be appropriate in some instances.

3 Evaluation process – elements

It is important to clearly define and agree upfront the purpose(s) for doing the evaluation and what you want to end up with at its conclusion. Evaluations can be carried out for a range of reasons:

- to report achievements, investment outcomes and impacts
- to contribute to evidence about what strategies, processes and systems work
- to inform strategic planning
- to identify reasons for further investment
- to improve project delivery (later stages or future projects).

A range of issues may need to be addressed, but it is important to define and agree this at the outset. This will shape the methodology and cost of the process. Thought should also be given to potential evaluation stakeholders and to matching the output of the evaluation to the purpose and audience.

Possible audiences and products from evaluations:

Program participants - Newsletters, brochures, electronic responses, report cards

General public - Newspaper or magazine articles, postcards, websites

Project team - Workshops, internal reports, performance indicators

Stakeholders - Seminars, reports, DVDs, data summary sheets

Senior management - Recommendations, briefings, presentations

Funding bodies – Formal reports, summary reports, key findings

Policy and research community - Journal articles, online articles, conference presentations

Source: Department of Community Planning and Development, Evaluation Step-by-Step Guide

Figure 3.1 shows the key elements of a project evaluation.

Figure 3.1: Project evaluation elements

3.1 Scope and scale

Defining the purpose establishes the scope – what is to be included and what is not.

The objectives of the investment will also drive the scope, and will vary according to the investment's size and complexity. It may also be affected by any significant stakeholder concerns raised over the project to date.

The scale of the review will depend on whether the investment is providing a service, economic infrastructure or includes a long-term service contract, such as *Partnerships Victoria* projects. The checklist of issues in Appendix C can be used to help define the scope.

A project evaluation may incorporate or take account of other post-implementation reviews, including:

- *value management studies:* these review progress, including assessing the estimated costs and benefits in the business case
- *benefits realisation reviews:* these assess whether forecast cost savings, efficiencies and other benefits are being realised, particularly regarding information and communications technology (ICT) projects
- *post-occupancy reviews:* these allow contract payments or securities to be finalised
- *environmental assessments: these* can feed into agencies' triple bottom line reporting.

3.2 Determine the methodology

The methodology provides the framework for performing the evaluation. A generic approach to setting the methodology is set out below. Tailored for the type of project, the approach should take into account the types of analysis required – economic, social, environmental or budgetary – as detailed in Appendix A.

The methodology should:

- specify the evaluation objectives
- identify the key stakeholders
- develop an indicative list of issues to be assessed with those stakeholders
- determine the information to be gathered and its sources
- identify any specialist technical or industry-specific expertise required
- determine the approach to gathering information.

The specification of objectives should include measures of the success of a project using well defined criteria. The criteria established in the business case will help determine whether the project is progressing according to expectations. Such criteria should link to the initial indicators – identifying the need which prompted the investment.

These criteria include:

- the degree to which target outcomes have been achieved

- the delivery of the outputs or services specified
- whether the project met the projected budget and timelines
- the adherence to documented plans and standards.

It is generally necessary to discuss the methodology for the evaluation with key project stakeholders. They can provide an understanding of the history, background and sensitivities of the project and explain their expectations. Also relevant project material should be reviewed, including the type of information set out in Appendix B.

As well as reviewing existing data and reports, the methodology may include some commonly used information collection techniques such as:

- questionnaires and surveys, including email communication and web-based instruments
- semi-structured interviews based on a list of issues developed for each type of stakeholder
- observation
- focus groups and workshops.

The proposed information gathering process should be documented and reviewed (and tested and refined for major programs) before it is implemented to make sure that it is comprehensive and that it takes account of stakeholder sensitivities.

3.3 Identify major issues and findings

Many of the qualitative issues will become evident during the information gathering process. Quantitative issues will generally be identified by analysing financial and performance data and comparing it with the business case projections, including any best, most likely and worst case scenarios.

Analysing qualitative and quantitative information can suggest further issues and will help in developing draft findings.

A workshop to review the draft results is an opportunity to test their reasonableness. It can also indicate if further information or analysis is required to make valid findings.

3.4 Capture lessons learned

To meet its objectives, the evaluation should clearly assess:

- what worked well
- what can be improved.

The lessons to be learned could include, for example, a discussion of:

- how practical problems were overcome in planning, implementing and managing the project
- unexpected benefits that emerged
- experiences of project staff that provide useful insights for future projects.

The list of issues in Appendix C can help pinpoint where lessons can be learned for each stage of the project.

3.5 Recommendations

The findings and corresponding action items should be set down as recommendations, including:

- learnings for future project planning and management processes
- project-specific actions for ongoing operation (and if appropriate, future stage developments).

The set of recommendations should be supported by an action plan setting out responsibilities and timelines.

3.6 Project evaluation template

The deliverable from the project evaluation phase is a completed project evaluation template that should provide:

- an overall assessment of the project
- well-supported findings and identified learnings
- a list of practical recommendations.

The suggested content of the evaluation report is set out below. The level of detail in the report will vary depending on the complexity and scale of the particular project. However, the report should show that each of the issues has been considered.

The executive summary is a particularly important part of the evaluation report. It must contain a clear, concise, plain-English outline of the evaluation, linking it to the evolved project business case.

Appendix D is a project evaluation template. It includes:

- executive summary
- project background
- evaluation scope and methodology
- findings
  - evaluation assessment
  - risk management
  - future implications
- conclusions and options
- recommendations and action plan
- appendices, with key documents or other reports referenced.

4 Project assurance

The Gateway Review Process is part of the project management framework for Victorian Government agencies. It offers project executives an opportunity to have their project assessed critically but constructively at key decision points in the project development lifecycle, before the project proceeds to the next stage.

Although only medium or high-risk projects are formally subject to the process, many projects may benefit from undertaking a similar peer or expert review (scaled as appropriate to the project). This can enhance progress through to implementation outcomes.

4.1 Gateway Review Gate 6: Benefits Evaluation

Gate 6: Benefits Evaluation confirms that the benefits set out in the business case are being achieved and that the operational service, product (or facility) is running smoothly.

The aims of the review include, but are not limited to:

- confirmation that the business case for the project (at Gate 4) was realistic
- confirmation that there is still a business need for the investment
- confirmation that the benefits anticipated to be achieved at this stage are actually being delivered
- ongoing continuous improvement mechanisms to improve value for money
- ongoing requirements to meet the business need
- checking that changes made do not compromise the original delivery strategy
- confirming that there are plans to manage operational contracts through to completion
- assessing lessons learned and methodology for sharing information with Government.

Documentation reviewed during Gate 6 includes:

- an updated business case that reflects actual operating conditions, baselined against the business case in Gate 5
- a report on the findings from any post-implementation review
- an assessment of the benefits delivered to date and expectations for the future
- a summary of contract changes since Gate 5
- plans for contract improvement
- performance reviews, key performance indicators (KPIs) and performance measurement systems

- resources, skills appraisals and personnel plans to continue managing the contract
- plans for disposal of any assets
- customer surveys and reports on stakeholder issues
- for construction projects, an updated occupational health and safety file
- for IT-enabled projects, security documentation
- a benefits management plan.

Further information on the Gateway Review Process can be found at www.gatewayreview.dtf.vic.gov.au.

Resource directory

Further information may be obtained from the following publications/websites. Please advise the Department of Treasury and Finance if your agency, or other agencies, have additional information that should be included in this listing.

Resource name	Access details
Investment Management Standard	
Problem Definition (Investment Logic Map)	www.dtf.vic.gov.au/investmentmanagement investmentmanagement@dtf.vic.gov.au
Solution Definition (Investment Concept Brief)	
Benefit Definition (Benefit Management Plan)	
Business Case	
Investment Reviews	
Benefit Report	
Gateway Review Process	
Project Profile Model	www.gatewayreview.dtf.vic.gov.au gateway.helpdesk@dtf.vic.gov.au
Program Reviews	
Gate 1 Review: Strategic Assessment	
Gate 2 Review: Business Case	
Gate 3 Review: Readiness for Market	
Gate 4 Review: Tender Decision	
Gate 5 Review: Readiness for Service	
Gate 6 Review: Benefits Evaluation	
Investment Lifecycle Guidance	
Overview	www.lifecycleguidance.dtf.vic.gov.au
Strategic Assessment	
Options Analysis	
Business Case	
Project Tendering	
Solution Implementation	
Post-implementation Review	
Supplementary Guidance	
Investment Evaluation Policy and Guidelines	www.lifecycleguidance.dtf.vic.gov.au
Project Alliancing Practitioners' Guide	
Procurement Strategy Supplementary Guideline	
Melbourne Water Triple Bottom Line	
Asset Investment Reporting	www.dtf.vic.gov.au/assetinvestmentreporting
Asset Management Policy	www.dtf.vic.gov.au/assetmanagementpolicy
Multi Year Strategy	www.dtf.vic.gov.au/multiyearstrategy
Partnerships Victoria Guidance	www.partnerships.vic.gov.au
Other Guidance	
Building Commission Guidance	www.buildingcommission.com.au
Capital Development Guidelines	www.dhs.vic.gov.au/capdev.htm
Construction Supplier Register	www.doi.vic.gov.au
Environmental Sustainability Framework	www.dse.vic.gov.au
Health Privacy Principles	www.health.vic.gov.au/hsc/
Human Rights Charter	www.justice.vic.gov.au
Information Privacy Act	www.privacy.vic.gov.au
Multimedia Victoria	www.mmv.vic.gov.au/policies
Standards Australia	www.standards.org.au
Tender Documentation	www.tenders.vic.gov.au
Whole of Government Contracts	www.vgpb.vic.gov.au

Glossary

Asset management framework: A Victorian Government initiative to allow the Expenditure Review Committee to exercise greater strategic control over the asset base, with a tighter focus on adapting the asset base to better support output delivery. The framework has a series of linked strategies (service strategy, asset strategy and multi-year strategy) that guide investment planning in departments and agencies.

Appraisal: The process of defining objectives, examining options and weighing up the costs, benefits, risks and uncertainties of those options before a decision is made.

Asset option: An asset option is a means of satisfying service needs by investing in existing assets or creating new assets.

Asset strategy: Sets the direction and communicates up-front the assumptions and decisions about levels of service and who provides them; is the means by which an entity proposes to manage its assets over all phases of their lifecycle to meet service delivery needs most cost-effectively.

Assets: Service potential or future economic benefits controlled by an entity (e.g. a department) as a result of past transactions or other past events. Assets may be physical (e.g. plant, equipment or buildings) or non-physical (e.g. financial investments). Assets may also be current (having a store of service potential which is consumed in one year or less) or non-current (having a store of service potential that is consumed over a period of more than one year).

Base case: The base case is a realistic option that involves the minimum expenditure to sustain existing standards of service delivery or to achieve previously agreed service standards. Therefore, the base case does not always mean 'do nothing'; rather it is the minimum essential expenditure option (e.g. carrying out obligatory works to meet safety and health regulations).

Benefit: The value that the investment will provide to the organisation or its customers. Benefits are normally a positive consequence of responding to the identified driver. Each claimed benefit must be supported by key performance indicators that demonstrate the investment's specific contribution to the identified benefit.

Benefit management plan: A short document that defines the pre-requisites for delivering each expected benefit, how the delivery of each benefit will be measured, and who will be responsible for measuring and realising each benefit.

Benefit reports: Regular reporting of the delivery of benefits, which are tracked and reported consistently with the benefit management plan.

Business case: A document that forms the basis of advice for executive decision-making for an asset investment. It is a documented proposal to meet a clearly established service requirement. It considers alternative solutions, and identifies assumptions, benefits, costs and risks. The development of the business case is based on the logic in the investment logic map.

Capital expenditure: Expenditure involved in creating or upgrading assets.

Change: The things that must be done by the business if the benefits are to be delivered. The changes provide detail of how the strategic intervention defined in the objective will actually happen.

Cost: An expense incurred in the production of outputs.

Cost-benefit analysis: Cost-benefit analysis is a technique that can express in a comparable (monetary) way the net effect of the costs and benefits associated with an investment proposal.

Demand management: A management technique used to identify and control demand for services.

Depreciation: The allocation of the cost of an asset over the years of its useful life.

Disposal: The process in which an asset is disposed of or decommissioned – resulting in removal from an entity's balance sheet.

Dis-benefit: A negative impact that might occur as a direct consequence of implementing a particular solution.

Driver: The reason that action needs to be considered at this time. Drivers are normally couched in negative terms such as 'Climate change is demanding new ways of living in Australia'. A driver should capture the essence of what is broken and the consequences.

Economic cost (or opportunity cost): The value of the most valuable of alternative uses.

Enabling asset: Any physical asset that must be built or purchased for the identified changes to occur. This may be, for example, a hospital, a pipeline or an IT system.

Evaluation: The process of defining objectives, examining options and weighing up the costs and benefits before a decision is made to proceed.

Financial analysis: An investment evaluation technique that is confined to the cash-flow implications of alternative options and is undertaken from the perspective of the individual department or agency or government as a whole.

Gateway Review Process: A review of a procurement project or a program of works/activities carried out at critical points of a project/program's development by a team of experienced people, independent of the project team. These critical points are known as Gateways or Gates. There are six gateways during the lifecycle of a project and reoccurring program reviews for programs of works/activities.

***Growing Victoria Together*:** A ten-year Government vision that articulates what is important to Victorians and the priorities that the Victorian Government has set to build a better society.

ICT-dependent: Information and communications technology (ICT)-dependent projects meet any of the following conditions: The ICT component of the project is critical to the overall success of the investment; or $5 million or more of the total estimated investment (TEI) is assigned to the ICT component; or 50 per cent or more of the TEI is assigned to the ICT component. Examples of ICT components include hardware purchases, software development and IT project management costs (i.e. anything that is covered by the whole-of-Victorian Government ICT classification.

Impact: The cost, benefit or risk (either financial or socio-economic) rising from an investment option.

Investment: The expenditure of funds intended to result in medium to long-term service, or financial benefits rising from the development or use of infrastructure or assets by either the public or private sectors. A single investment proposal may contain a number of related investment expenditures addressing the same service need.

Investment concept brief: A two-page document that shows the logic underpinning an investment and identifies the likely costs, risks, dependencies and deliverables of the proposed solution. It summarises the merits of an investment and allows decision-makers to prioritise competing investments before proceeding to the business case.

Investment logic map: A simple single-page depiction of the logic that underpins an investment. It provides the core focus for an investment and is modified to reflect any changes to the investment logic throughout its lifecycle.

Investment Management Standard: A best-practice approach applied over the life of an investment that aims to reduce the risk of investment failure, provide greater value-for-money and drive better outcomes. It has been designed to enable the *investor* to shape and control investments throughout their lifecycle.

Investment reviews: Formal scheduled periodic reviews that aim to confirm that the logic for an investment remains valid.

Investor: The person who has an identified business problem (or opportunity), will be responsible for making (or advocating) a decision to investment, and who will be responsible for delivering the expected benefits. This person is often referred to as the 'senior responsible owner'.

Lifecycle cost: Lifecycle cost is the total cost of an item or system over its full life. It includes the cost of development, production, ownership (operation, maintenance, support), and disposal, if applicable.

Key performance indicator (KPI): A measure that has been selected to demonstrate that a benefit expected from an investment has been delivered. The KPI must be directly attributable to the investment.

Multi-year strategy: An agreed listing of asset and non-asset initiatives intended to be implemented in the medium term (generally, the next 5-10 years).

New asset option: Acquisition, transfer or commissioning of an existing asset, or creation of a new asset.

Non-asset option: Under this option, service capacity is met without creating additional assets. This could be done through reconfiguration of the way the services are provided (contracting out, increased use of existing or private assets, or reduction of demand through selective targeting).

Objective: The high-level action (or strategic intervention) that is proposed as the response to the identified driver. This intervention must be framed within the context of the organisation's purpose.

Optimism bias: The demonstrated systematic tendency for appraisers to be over-optimistic about key project parameters, including capital costs, operating costs, works duration and benefits delivery.

Options analysis: A process in which a range of options (both asset and non-asset) are evaluated. The most cost-effective options are then selected for more detailed evaluation through a business case.

Outcome(s): In the Government's output/outcome framework, outcomes equate to benefits.

Partnerships Victoria: The Victorian framework for a whole-of-government approach to the provision of public infrastructure and related ancillary services through public-private partnerships. The policy focuses on whole-of-life costing and full consideration of project risks and optimal risk allocation between the public and private sectors. There is a clear approach to value for money assessment and the public interest is protected by a formal public interest test and the retention of "core" public services. Partnerships Victoria is most useful for major and complex capital projects with opportunities for innovation and risk transfer.

Project alliancing: A form of procurement where the State or another government entity collaborates with one or more service providers to share the risks and responsibilities in delivering the capital phase of a project. It seeks to provide better value for money and improved project outcomes through a more integrated approach between the public and private sectors in the delivery of infrastructure. Project alliancing should generally only be considered in the delivery of complex and high-risk infrastructure projects, where risks are unpredictable and best managed collectively.

Project lifecycle: The stages of an asset lifecycle between the identification of the need and the delivery and handover of an initiative.

Proposal: An idea for a policy, program or project that is under development and appraisal.

Residual value: The net value applied to the asset at the end of the investment lifecycle or evaluation period; this may result in either a positive or a negative value.

Resources: Labour, materials and other inputs used to produce outputs.

Revenue: Inflows or other enhancements, or savings in outflows, of service potential or future economic benefits in the form of increases in assets or reductions in liabilities of the entity (other than those relating to contributions by owners) that result in an increase in equity during the reporting period.

Risk: Risk is often characterised by reference to potential events, consequences, or a combination of these and how they can affect the achievement of objectives. Risk is often expressed in terms of a combination of the consequences of an event or a change in circumstances, and the associated likelihood of occurrence.

Risk versus uncertainty: Uncertainty is the extent of variability in the capacity to achieve the desired outcomes or the outcomes themselves. Risks lead to uncertainty.

Scenario analysis: Scenario analysis is a procedure for providing the decision-maker with some information about the effect of risks and uncertainties on an investment. In a scenario analysis, a set of critical parameters and assumptions that define a particular scenario are identified and varied to reflect a best-case and a worst-case scenario.

Service strategy: The strategy for the supply of appropriate services to the community, which is consistent with the entity's corporate goals. It is based on strategic analysis and review of how services are presently provided.

Social benefit: The estimated direct increase in the welfare of society from an economic action. It is the sum of the benefit to the agent performing the action, plus the benefit accruing to society as a result of the action.

Social cost: The estimated direct total cost to society of an economic activity. It is the sum of the opportunity costs of the resources used by the agent carrying out the activity, plus any additional costs imposed on society from the activity.

Strategic assessment: The phase of the project lifecycle during which a need is translated, where justified, into a proposal where outcomes, purpose, critical success factors and the level of strategic alignment are clearly defined.

Value management: Value management is a technique that seeks to achieve optimum value for money, using a systematic review process. The essence of value management is a methodical study of all parts of the product or system to ensure that essential functional requirements are achieved at the lowest total cost. Value management examines the functions required from a product, functions actually performed, and roles of the product's components in achieving the required level of performance. Creative alternatives which will provide the desired functions better or a lower cost can also be explored.

Weighting and scoring: A technique that assigns weights to criteria, and then scores options in terms of how well they perform against those weighted criteria. Weighted scores are summed, and then used to rank options.

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Appendix A: Types of analysis

Economic analysis

Economic analysis assesses the impact of projects or initiatives on the economy. The costs and benefits of undertaking the project should be identified, valued, analysed and ranked according to their net economic benefit. The two main approaches to economic analysis are cost/benefit analysis and cost/effectiveness analysis.

Social analysis

An analysis of social impacts is needed to provide a full assessment of a project. A social analysis will assess whether the project has:

- resulted in significant distributional shifts in costs and benefits between and within communities
- substantially affected employment, trade, the private sector, or other levels of government
- caused unexpected or disproportionate disadvantages to a particular sector
- provoked appreciable community concern
- required changes in government policy or strategy.

Environmental analysis

An environmental analysis may be required to assess whether the project has met the requirements of environmental or heritage legislation. It assesses the extent and nature of the environmental issues rising from the project, including a revised environmental impact statement highlighting any significant issues.

It provides information for comparing the current situation against the environmental risks and costs identified in the business case. It is an opportunity to assess the need for corrective action.

The analysis should:

- assess the extent and nature of both on-site and off-site environmental consequences
- review short and long-term environmental effects
- identify opportunities to improve environmental outcomes (e.g. from incorporation of conservation initiatives)
- report on whether the communication process adequately addressed environmental issues of significant community concern.

Budget analysis

The evaluation should include a budget analysis so the actual budgetary impacts can be assessed against those identified in the approved business case. The business case is

required to identify whole-of-life costs for the project, including operational, maintenance and scheduled capital upgrades for the asset lifecycle.

All effects on the budget should be documented in terms of:

- accrual impacts: capital expenditure, operating costs (including depreciation) and any revenue streams

- cash flow impacts: one-off and recurring outlays.

Where appropriate, an asset management plan should be developed to forecast the timing and cost of renewals, refurbishments, and regular and cyclical maintenance.

Appendix B: Background information

In developing and implementing the methodology, the following background material should be reviewed:

- the approved business case (updated as necessary)
- feasibility studies
- value management reports
- the project budget
- the business plan or project implementation plan
- cost plans and activity and cost outcome data
- contract documentation
- the contract/performance management plan
- risk registers
- the issues log and progress reports.

In addition, the following records should be reviewed where they are relevant:

- a summary of contract changes since any previous project evaluations or Gateway Reviews
- plans for contract and service improvement
- management and other appraisals regarding the continuation of existing management contracts
- reports on stakeholders' issues for example, complaint registers
- plans for disposal of assets at the end of the project
- risk management assessments and reports
- health and safety reports and files
- for ICT-enabled projects, security documents (e.g. Accreditation Document Set).

Appendix C: Specific issues

This checklist of issues can be used to help define the scope, lessons learned and other evaluation issues.

Evaluating against the business case

- Assess whether the business case assumptions were realistic and remain valid.
- Assess whether the anticipated benefits (including outputs and outcomes) are actually being delivered.
- Compare operating costs and revenue streams against expected levels.
- Evaluate how well the needs and expectations of end-users are being met, including any changes in the type or expected level of their needs.
- Review whether and how well the requirements of other key stakeholders have been met, including those of local governments and community groups.
- Assess whether any productivity target for the service has been achieved or is likely to be achieved.
- Compare the level of maintenance required with that expected.
- Compare the actual whole-of-life costs with the budget estimate set in the business case.
- Assess the ongoing need for the service.
- If the service is required into the future, assess its likely scope.
- Assess measures for ongoing performance assessment:
    - ongoing service delivery
    - programs of change or improvement
    - contract impacts and specified milestones.

Evaluating the procurement stage

- Assess the adequacy of funding arrangements, including for refurbishment, replacement, renewal and maintenance.
- Review the use and validity of modelling (particularly for capturing end-user input early in the project lifecycle).
- Review the procurement strategy adopted. Has it provided the best value-for-money option for the State in delivering the infrastructure and service outputs?

- Identify improvements that might be made to existing procurement processes (including tendering, short-listing, selection and probity processes) as a result of this project.
- Assess the benefits from value management and value engineering.
- Review whether maintenance has been programmed.

Evaluating the construction/implementation stage

- Assess working relationships during construction and/or implementation.
- Identify particular aspects where the contractor or facility manager was able to be innovative.
- Consider how standard components have been adopted into the facility and how much of the project was pre-assembled before delivery to site.
- Assess the use of tools such as three-dimensional modelling.
- Review the contribution made by any change management consultants or industrial psychologists.
- Assess the adequacy of the health and safety reporting system during site preparation and construction.

Evaluating the post-implementation phase

- Assess the adequacy of project documentation and training material and whether skills transfer has occurred.
- Confirm that the client has the resources to manage the contract successfully.
- Confirm the continuity of key personnel involved in contract management, including in the role of the ‘intelligent customer’.
- Consider the need for continued or extended contract management.
- Evaluate the adequacy of risk management plans and the success of strategies to manage risks.
- Assess the adequacy of change management and stakeholder communication strategies.
- Assess how well the design has facilitated effective cleaning and maintenance.
- Consider how well the facility assists the core business of the organisation.
- Determine the flexibility to allow for changes in user needs over time.
- Assess how the design contributes to the environment around the facility and to the internal environment for the occupants.
- Review the health and safety performance during occupation.

Evaluating the contract

- Review the performance-based specification.
- Assess the performance measures and ensure coverage of all aspects of the contract.
- Review the effectiveness of contract incentives and pain/gain share arrangements.
- Determine whether the selected performance measures offer clear and demonstrable evidence of the success (or otherwise) of the contract.
- Where changes have been agreed in the contract arrangements, check that they do not compromise the original outcomes sought.
- Assess whether the dispute resolution processes have been effective and whether alternate mechanisms should be considered in future.
- Confirm that there are plans to manage any contracts to their conclusion.
- Evaluate whether the contract management processes been benchmarked by comparing them with other organisations involved in similar relationships.
- Does the arrangement facilitate fair competition on the re-tendering of the contract?
- If an exit strategy is needed – do the contract arrangements allow for the transition to be as smooth as possible?
- Has there been a review of how well the contracts were or are being managed?

Evaluating contractor performance

- Determine whether the prime contractor has fully provided the contract deliverables within the timelines required.
- If circumstances have changed, are the service delivery arrangements adapted to the new situation and reflected as required in contract documents? (Changing circumstances could affect management of partners, stakeholder relationships, services, change processes, contracts, benefits and performance monitoring.)
- Determine the scope for improved value for money including:
  - Can more be done with less?
  - Could the provider deliver better service quality at the same price?
- If ongoing contract management is required:
  - Review the adequacy of client and supplier resources for the task.
  - Investigate whether there are well defined, implemented and effective processes for embedding improvements based on lessons learnt from the project?
  - Have contractors participated in the learning process?

Appendix D: Project evaluation template

The deliverable from the project evaluation phase is a project evaluation template that should provide:

- an overall assessment of the project
- well-supported findings and identified learnings
- a list of practical recommendations.

The suggested content of the evaluation report is set out below. The level of detail in the report will vary depending on the complexity and scale of the particular project. However, the report should show that each of the issues has been considered.

The executive summary is a particularly important part of the evaluation report. The executive summary must contain a clear, concise, plain-English outline of the evaluation, linking to the evolved project business case.

Project evaluation template
1 Executive summary
Overall assessment
Lessons learned
List of recommendations and actions
2 Project background
Origin of project (strategic assessment context)
Project goals and objectives
Project summary: timing, budget and status
3 Evaluation scope and methodology
Evaluation objectives and focus
Evaluation criteria/key questions
Scope, terms of reference and timing
Evaluation team and resources
Methodology and design parameters – data collection and analysis methods, data sources
4 Findings
Evaluation assessment • Benefits realised against the business case • Costs incurred against projections • Alignment with business objectives • Stakeholder satisfaction

Project evaluation template

- Contract management performance
- Unexpected findings

Risk management

- Technical risks
- Business risks

Future implications

- Deficiencies requiring remedy
- Lessons learned
- Limitations of evaluation

5 Conclusions and options

Overall judgement on the worth of the project

Discussion of key findings and their validity and reliability

Options for future change and improvement

6 Recommendations and Action Plan

List of recommendations

Action plan

7 Appendices

Key documents or other reports referenced

Schedule of interviews or workshops, surveys undertaken and other information gathering techniques used

Statistical data

Technical reports