

# Investment Lifecycle and High Value High Risk Guidelines

## **BUSINESS CASE**

(FORMERLY CONCEPTUALISE AND PROVE)



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ISBN 978-1-925551-55-6 (pdf/online/word)

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# Acknowledgements

The Department of Treasury and Finance (DTF) wishes to acknowledge those who contributed to this guide. In particular, the agencies of the Victorian Government that participated in the consultation for this work.



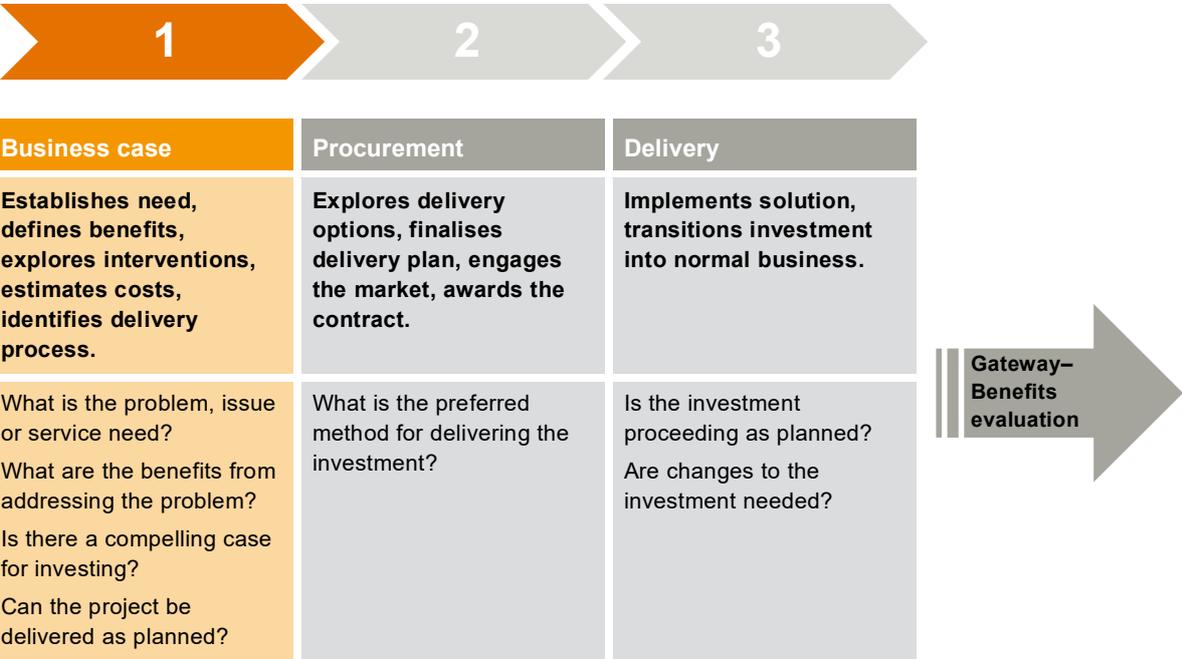
# Context

## Purpose of this document

This guide presents the issues agencies should consider when they are preparing a business case for investment to address a problem or opportunity in the delivery of government services. **It is applicable to any investment proposal – asset or output.** The investment lifecycle framework lays out the following stages of an investment.

There are three stages in the investment management process. This guide is concerned with the first stage of the investment lifecycle – Stage 1: Business case.

Figure 1: The three stages of the investment management process



**For projects over \$250 000**, projects will be monitored through the Quarterly Asset Investment Report.

**For all capital projects over \$10 million**, a business case is required. All capital projects over \$10 million including those which are not classified High Value High Risk (HVHR) (see the following section for classifications) should follow this guide. For non-HVHR projects, it is not mandatory to comply with requirements set out in *Stage 2: Procurement* and *Stage 3: Delivery*; however, these processes should be considered as best practice for managing investments. Non-HVHR projects must comply with the requirements of the Ministerial Directions for Public Construction Procurement in Victoria.

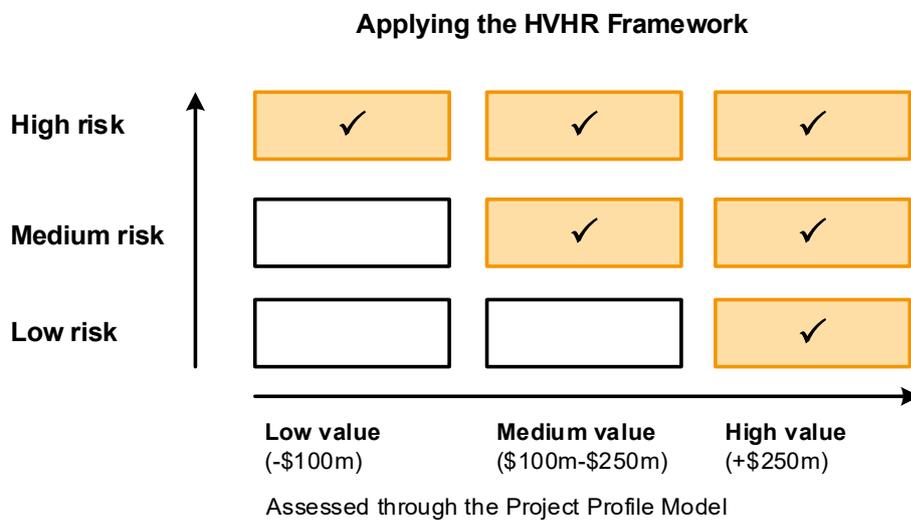
**For HVHR projects**, additional assurance requirements will apply in the procurement and delivery phases. Mandatory Gateway reviews apply across the project lifecycle. A project’s HVHR classification is based on the risk and value profile of a project, which is explained further in this guide.

## Which investments are HVHR?

A project will be classified HVHR if it is a budget-funded project that is:

- considered high risk using DTF's risk assessment tool, the Project Profile Model (PPM) (available on the DTF website);
- considered medium risk using the PPM and has a total estimated investment (TEI) of between \$100 million and \$250 million;
- considered low risk using the PPM, but has a TEI over \$250 million; or
- identified by Government as warranting the rigour applied to HVHR investments.

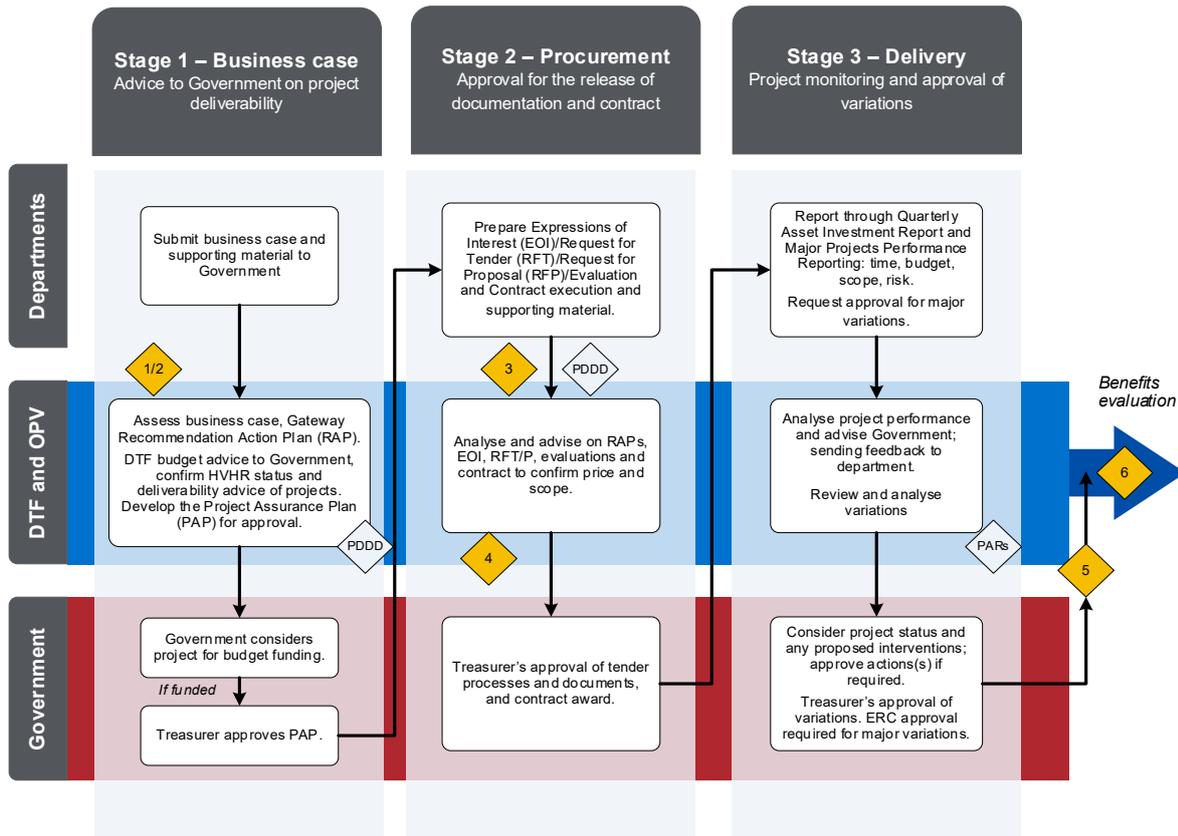
Figure 2: Determining the HVHR status of projects



# The Project Assurance Framework and process

The Project Assurance Framework is explained below. For non-HVHR projects over \$10 million, Project Assurance Plans (PAP) and Gateway reviews do not apply in Stage 1: Business case, as they apply to HVHR projects only. In Stage 2: Procurement and Stage 3: Delivery only departments' roles outlined below apply, as DTF assurance and Government approvals do not apply.

Figure 3: Project Assurance Framework



### Gateway reviews, Project Assurance Reviews, and Project Development and Due Diligence

- Strategic assessment business case (often combined)
- Readiness for market
- Tender decision
- Readiness for service
- Benefits evaluation
- OPV Project Development and Due Diligence
- OPV Project Assurance Review

## How to use this guideline

The purpose is to provide useful methods and processes that support agencies as they prepare investment strategies and proposals. The guide supports evidence-based decision-making. It is a tool to be scaled to the complexity of the investment.

The *Stage 1: Business case* guide is supported by the *Overview and glossary* guide, technical guides, tools and templates, and should be read in conjunction with these.

**Table 1: Stage 1 – document requirements and supporting guides and templates**

Stage 1: Business case	
Documents required to be submitted by departments	Tools, templates and resources to assist departments
<p>Business case template (investment and delivery case)</p> <p>Business case part 1: <i>Investment case</i></p> <ul style="list-style-type: none"> <li>Project Profile Model</li> <li>Investment logic map</li> <li>Benefit management plan*</li> <li>Red-rated Gateway recommendations in the recommendation action plan</li> </ul> <p>Business case part 2: <i>Delivery case</i></p> <ul style="list-style-type: none"> <li>Procurement strategy</li> <li>Risk register*</li> <li>Detailed project schedule</li> <li>Detailed cost plan</li> <li>Red rated Gateway recommendations in the recommendation action plan</li> </ul> <p>Note that for HVHR projects, DTF will undertake the following:</p> <ul style="list-style-type: none"> <li>DTF project assurance plan</li> <li>DTF independent cost review</li> </ul> <p><b>HVHR projects are required to undergo Gateway Review Process: Gates 1/2</b></p>	<ul style="list-style-type: none"> <li>Business case guide and template</li> <li>Project Profile Model, instructions and glossary</li> <li>Investment Management Standard including investment logic map and benefit management plan</li> <li>Economic Evaluation technical guide</li> <li>Value Creation and Capture (see Department of Premier and Cabinet website)</li> <li>Procurement strategy technical guide and template</li> <li>Risk management technical guide</li> <li>Risk management plan*</li> <li>Project budget technical guide</li> <li>Project governance technical guide</li> <li>Developing ICT investments technical guide</li> <li>Real options analysis technical guide*</li> <li>Application of HVHR project assurance framework to market-led proposals</li> <li>Project Development and Due Diligence Guidelines</li> <li>Victorian Government Risk Management Framework (VGRMF)</li> <li>Resource Management Framework (RMF)</li> </ul>

\* 'Live' document/guides are also relevant across the investment lifecycle (stages 1-3). Note that live documents may require project teams to update these periodically across the project lifecycle.

The technical guides are available on the DTF website at [www.dtf.vic.gov.au/infrastructure-investment/investment-lifecycle-and-high-value-high-risk-guidelines](http://www.dtf.vic.gov.au/infrastructure-investment/investment-lifecycle-and-high-value-high-risk-guidelines)

## Who should use this guide

The guides target a broad range of stakeholders, both internal and external to the public sector, involved at all stages of the investment lifecycle. The lifecycle guides are designed to be useful for those with varying levels of investment knowledge and a range of requirements. As a funding submission will ultimately be a Minister's submission to the Government, departments retain accountability and responsibility for the investment planning process.

The responsibility for the direction and production of these key documents should not be 'outsourced' to external consultants. However, external consultants may be of great assistance and their use should be considered where the necessary skills and resources are not available within an organisation.

The following are key roles involved in investment management.

**Table 2: Roles definition**

<b>Department</b>	Leads departmental planning including corporate plans, service planning and asset management. Prepares and delivers business cases.	<b>Client</b>	Develops and prioritises the portfolio's capital projects and programs. Defines objectives, scope, and service needs. Manages associated portfolio-level risks. Ultimate owner of the completed asset.
		<b>Senior Responsible Owner (SRO)</b>	Appointed for the project's direction at board level, particularly in the case of significant investments. Represents the 'client'. Note: departments may wish to appoint a secondary SRO responsible for delivery-related activities.
		<b>Delivery agency</b>	Delivers a project or program in accordance with a specific business case via a temporary project team. Manages program and project level risks.
<b>DTF/OPV</b>	Determines HVHR status of asset proposals through Project Profile Model. Assesses business cases with DPC and advises Government on investments. Develops Project Assurance Plan for HVHR investments. Ongoing involvement for HVHR investments. Assesses Gateway/Project Assurance Review Recommendation Action Plan if required. With OPV undertakes: <ul style="list-style-type: none"> <li>• Gate 1 (investment case);</li> <li>• Gate 2 (delivery case) (typically combined reviews with 1); and</li> <li>• Project Assurance Reviews, as required.</li> </ul>		
<b>DPC</b>	Assesses business cases with DTF and advises Government. Ongoing involvement for some investments. Undertakes assessment of Value Creation and Capture documentation for required investments.		
<b>Government</b>	Sets priorities and context. Undertakes early filtering of asset proposals, if required. Approves investments and funding.	<b>Investor</b>	Accountable for fiscal management and oversight of aggregate capital spending across Government through the budget process, including: <ul style="list-style-type: none"> <li>• the allocation of capital to and between departments/agencies;</li> <li>• the approval of the projects to be funded from within those allocations; and</li> <li>• management of the statewide fiscal risks.</li> </ul>

# 1. Introduction

## 1.1 The business case stage

Stage 1: Business case covers the detailed examination of an investment proposal and the development of the business case. The investment case section of the business case confirms the problem definition and intended benefits, and the delivery case section considers whether the project solution is feasible and deliverable.

All investment proposals over \$10 million seeking budget funding are required to submit a full business case.

The purpose of submitting a business case is to provide confidence to decision-makers that the:

- strategic justification for the investment is valid;
- right investment option is selected; and
- agency can deliver the investment as planned.

The business case lays the blueprint for the whole investment lifecycle and its role changes as the project moves through the investment lifecycle. In Stage 2: Procurement and Stage 3: Delivery it is used to ensure the investment is being delivered as planned. If there are any material changes that affect the business case, the business case should be updated, and ongoing business justification should be assessed in light of new details.

## 1.2 Building the business case

### 1.2.1 Creating the business case – length and style?

**The level of detail in the business case should be appropriate to the scale and complexity of the investment.**

Agencies should provide an evidence-based case to justify the investment. The business case should be in plain English and set out the case for the proposed investment. Important technical data can be included as an appendix, such as costings, risk management, and technical information to support the deliverability of the investment. The level of technical detail required will vary depending on the size, scale and complexity of the investment.

It should be noted that all business cases need to be developed to address the specific issues of the investment in question. As a result, some simple investments may need to provide more detail than suggested on specific aspects unique to the particular investment. The depth of evidence should be appropriate to the nature, size and complexity of the investment and should be assessed on a case-by-case basis.

Examples of a simple project include:

- minor refurbishment of a courthouse;
- simple sports and recreational build;
- something done many times before; and
- upgrading rolling stock.

Examples of a complex project include:

- a new freeway project;
- a new public transport IT system;
- a major sports centre build;
- a major regional development expansion project;
- projects that affect a complex group of stakeholders; and
- a project where there are many high risks.

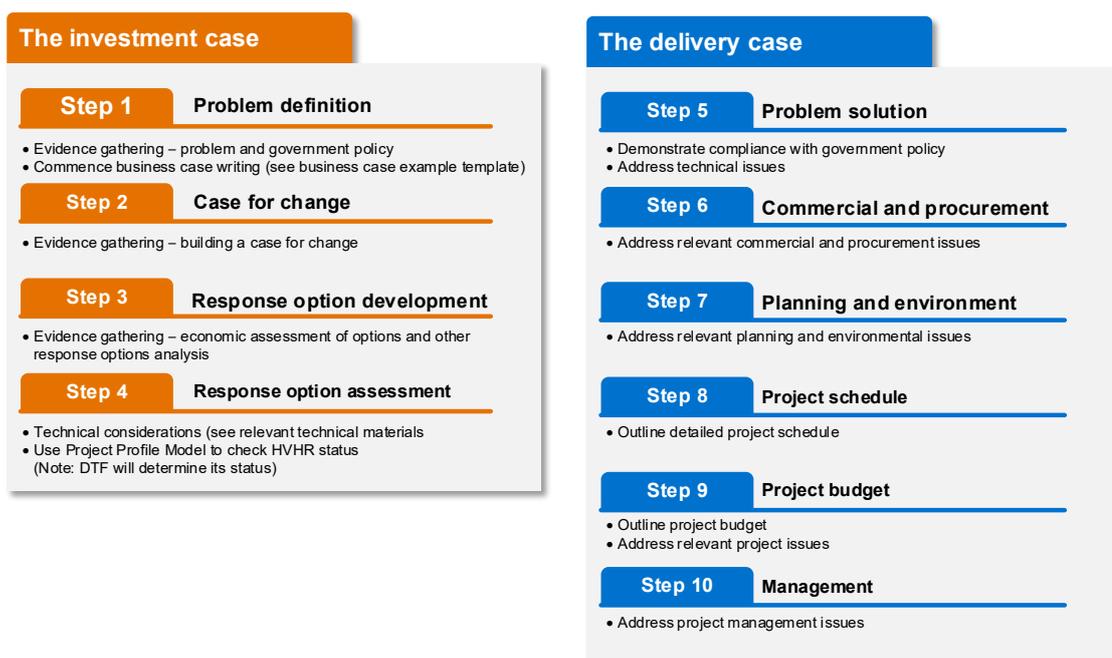
**Agencies should use their judgement to ensure relevant detail is presented.**

## 1.2.2 The two sections of a business case

The **business case is formed of two key components:**

- **the investment case:** sets out the rationale for the investment, provides evidence of the scale of need, measures the impact of the problem and analyses response options; and
- **the delivery case:** demonstrates how the preferred solution can successfully deliver the intended benefits on time and on budget.

Figure 4: Business case chapters



**Table 3: Line of inquiry for the two sections of the business case**

The business case	
Investment case	Delivery case
<p>Initial examination of problems or opportunities that agencies believe warrant attention from Government. Allows decision-makers to consider the merits of the proposal and to determine whether it justifies further investigation.</p> <p><b>Key questions:</b></p> <ul style="list-style-type: none"> <li>• Is there a need?</li> <li>• What is the problem or business need to be addressed?</li> <li>• What benefits can the Government expect from successfully responding to the problem?</li> <li>• What response options will best address the identified problem or business need?</li> <li>• Is there any uncertainty impacting the problem definition, desired benefits, response options and/or the preferred response?</li> <li>• What is the best value for money project option that will address the problem and achieve the benefits?</li> </ul>	<p>Presents the case supporting whether the investment can be delivered as planned. This includes evidence to support the deliverability of project options and the preferred solution.</p> <p><b>Key questions:</b></p> <ul style="list-style-type: none"> <li>• Is there sufficient information to support the business case (e.g. economic evaluations, risk workshops, procurement strategy, etc.)?</li> <li>• What is the cost of the project and what benefits will be delivered?</li> <li>• What risks and uncertainties can be foreseen and how can these be managed?</li> <li>• What confidence does the business case provide for the project's costs and timescales?</li> <li>• Is the procurement strategy robust?</li> <li>• Is the governance structure appropriate for the type and scale of the project?</li> <li>• Can the project solution be delivered as planned?</li> </ul>

### 1.2.3 Types of business cases

There are two main recognised business cases: the preliminary business case, and the full business case. Strategic assessments are also recognised as a useful way for departments to filter investments before these are submitted to Government.

The preliminary business case allows departments and agencies to test the investment case with Government prior to committing to the development of a full business case. In some circumstances, particularly for large and complex projects, it may be appropriate to develop a preliminary business case that seeks funding for further development into a full business case.

The full business case is the most comprehensive business case and should be used for investment decision-making. The investment case provides the foundation for the full business case. For a full business case, the investment case should be comprehensive and contain the substantial evidence base establishing the case for Government to invest and provides the confidence it can be delivered as planned.

Table 4 below indicates the level of evidence and effort expected for different types of projects and business cases. This should be considered a guide only and may depend on other project-specific issues. For HVHR projects, the appropriate business case and level of development should be discussed with DTF.

**Table 4: Types of business cases for capital projects and expected level of evidence and effort**

Step	Strategic assessment	Preliminary business case	Full business case		
			HVHR	Non-HVHR	
Investment case	1. Problem definition	Conceptual	Developed	Comprehensive	Comprehensive
	2. Case for change	Conceptual	Developed	Comprehensive	Comprehensive
	3. Response option development	Conceptual	Developed	Comprehensive	Developed
	4. Response option assessment	N/A	Developed	Comprehensive	Developed
Delivery case	5. Project solution	N/A	Conceptual	Comprehensive	Comprehensive
	6. Commercial and procurement	N/A	N/A	Comprehensive	Comprehensive
	7. Environment and planning	N/A	Conceptual	Comprehensive	Comprehensive
	8. Project schedule	N/A	Conceptual	Comprehensive	Comprehensive
	9. Project budget	N/A	Conceptual	Comprehensive	Comprehensive
	10. Management	N/A	N/A	Comprehensive	Comprehensive

<b>Comprehensive</b>	<b>Developed</b>	<b>Conceptual</b>
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### 1.3 Whether to prepare a submission for a program or an individual investment?

Programs bring together multiple projects under a single coordinating structure, where each project contributes to the program outcomes. Programs can include pieces of work that are not projects (e.g. ongoing business as usual work) and can have a variety of structures. While investing in programs can improve network planning, efficiencies in procurement and reporting and provide a flexible approach to managing cost pressures across projects, it is important to maintain an appropriate level of scrutiny and accountability at the project level.

Program thinking is useful to:

- identify and respond to unmet priorities of an organisation (e.g. what are our investment priorities over the next 10 years?);
- help shape, manage and evaluate an interconnected collection of activities that contribute to a common outcome (such as an innovation strategy for the state); and
- prioritise and manage a program of works (such as a series of rail/road separations).

When deciding whether to prepare a Government submission presenting the case for a program, or an individual initiative that is part of a program, agencies should consider whether the core logic that is established in initiating an investment can be used for any of the following purposes:

- to obtain Government approval for the development of a proposed program of activities;
- to obtain Government approval for the prioritisation of similarly intended investment proposals; or
- to strengthen the case for the individual initiative if it is part of a program.

If it is appropriate to present a program submission, the submission could be presented in one of two formats:

- for programs consisting of several major, complex projects (for example, multiple HVHR projects), it may be appropriate to present a preliminary business case outlining the program 'master plan' and justifying the program logic. If supported, a full business case for the program can then be developed as an underlying support for the component projects. Agencies should then prepare separate business cases for major projects that are part of that master plan. It is important that transparency and responsibility for project outcomes are maintained and therefore the information supporting each project within a program should be as detailed as one developed for a stand-alone project; or
- for programs consisting of smaller, less complex projects, it may be appropriate to present a preliminary business case outlining the program logic, and then setting out the governance framework and criteria used to select projects within the program.

For further guidance on how to present proposals in a program submission contact DTF.

The governance of a program can consider individual projects at the same time; however, this should not reduce the robustness of the information presented for each project.

## 1.4 Accuracy of estimates in the business case

The accuracy of cost estimates and designs depends on the type of project and the type of business case. The table below indicates the expected estimate accuracy.

**Table 5: Summary of accuracy required**

Section	Processes	Estimate	Description and design accuracy
<b>Investment case</b> (A focus for the Preliminary Business case)	<b>Investment logic</b> Problem, benefits identification, response options, indicative solutions	Order of magnitude estimate type -40% to +60%	This estimate is used for screening and is based on historical information. Order of magnitude estimates are developed when a quick estimate is needed, and few details are available. It is typically developed to support 'what if' analyses. It is helpful for examining differences in high-level alternatives to see which are the most feasible. Because it is developed from limited data and in a short time, a rough order of magnitude analysis should never be considered a budget-quality cost estimate.

Section	Processes	Estimate	Description and design accuracy
	<b>Project scoping</b> Project option appraisal, define project scope (and options for further consideration) with concept design	Concept estimate -30% to +60%	This estimate is based on concept design data. For less complex projects, this level of estimate accuracy is sufficient to robustly compare project options. Project definition is likely to be in the order of 1 per cent to 10 per cent complete. In many cases there will be benchmark project data that will considerably reduce uncertainty (increase accuracy). For example, if the project were a new school, then there is extensive industry benchmark data from previous school developments.
<b>Delivery case</b> (A focus for the full business case)	<b>Pre-feasibility</b> Assessment of project options, initial risk and environmental assessment	Developed concept estimate -20% to +25%	For more complex projects, more design information would be expected to reasonably compare project options. Project design is likely to be in the order of 5 per cent to 15 per cent. These levels are probably more suitable for the 'one off', 'never been done before' type schemes.
	<b>Feasibility</b> Integration of risk assessment, preliminary design, functional model, whole of life costing and procurement strategy	Preliminary design estimate -15% to +25%	This estimate is used to provide the approved budget estimate for the project, i.e. the business case budget estimate. Project design is likely to be in the order of 10 per cent to 40 per cent. Costing at this stage is expected to be a robust, defensible, risk-adjusted estimate with an appropriate contingency allowance. The estimate should be based on a well-defined project scope, a breakdown of project costs (e.g. using elemental estimating techniques) supported by reference to relevant benchmark project examples and adjusted for risk and uncertainty.
	<b>Procurement</b> Staged tender process including tender preparation and evaluation	Tender estimate -10% to +15%	Prior to going to tender, design specifications will be developed in more detail in order to obtain tender bids. The estimate at this stage is based on the specification and design development leading up to the tender process. Project design is likely to be in the order of 30 per cent to 70 per cent depending on the nature of the procurement approach.

Section	Processes	Estimate	Description and design accuracy
	Negotiate contract price agreement	Tender price/contract (excluding agency administration cost) -5% to +10%	The tender price or contract estimate is based on the agreed contract price following the tender process. Note that the project should maintain a contingency allowance that exceeds this contract sum in order to manage uncertainty and unallocated risks.

To ensure agreement on cost estimates, contact DTF when developing cost estimates for investment proposals.

## 1.5 Gateway review at the business case stage

It is mandatory for HVHR investments to undertake Gates 1 and 2 reviews at Stage 1: Business case. Where a single full business case is being submitted for funding approval, Gates 1 and 2 are combined. Where a preliminary business case is being submitted, the project is required to undertake Gate 1 review prior to submission.

Gates 1 and 2 reviews should take place once the business case is 80 per cent to 90 per cent complete. It will examine the readiness and robustness of the business case documentation and investigate whether the project team has the capacity and capability to deliver the investment and transition to Stage 2: Procurement. Contact DTF's Gateway Unit for further information.

## 1.6 HVHR deliverability assessment

DTF undertakes a deliverability assessment of HVHR projects for the Treasurer as part of the budget process. To facilitate this, departments should ensure:

- a Gateway review of the full business case has been completed;
- Recommendation action plans (RAPs) for any red flag recommendations arising out of Gate 2 Gateway reviews have been completed and submitted to DTF; and
- a full business case (or at least a draft full business case) has been completed and submitted to DTF for the Treasurer's assessment of the business case's robustness and deliverability.

To ensure there are no delays in the approval process, departments should engage early with DTF and submit drafts intermittently throughout the business case development process.

## 1.7 Managing uncertainty

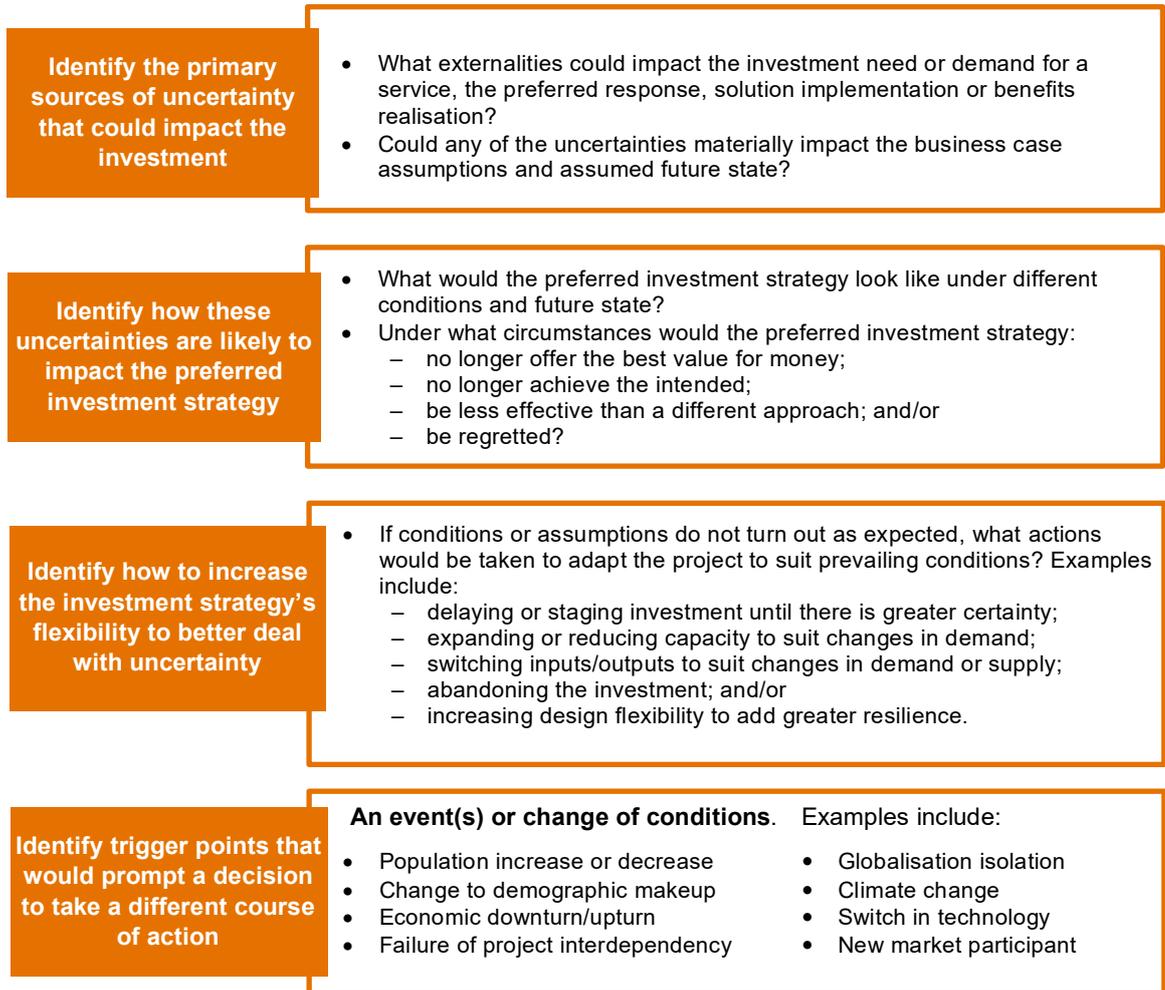
Many of the Government's investments are vulnerable to **uncertainty**: external factors that are beyond the investor's control, and that can impact the delivery of our intended investment outcomes.

Examples of external uncertainties that may impact a project include:

- unpredictable climate change, for example, the potential for tidal surges to damage infrastructure in coastal regions;
- industrial relations developments that materially impact on the investment objectives;
- quantum technology changes, particularly with ICT projects where the development cycle is short and competitive technologies may be developed to meet demand;
- global systemic shifts, for example, the global financial crisis impacting on the risk allocations in public private partnerships;
- learning from doing, which is sometimes experienced as more efficient and/or effective solutions of delivering services or constructing a project becoming evident during implementation;
- known unknowns, for example, how tenderers may respond to carbon pricing; and
- possible future shifts in policy positions currently constraining feasible approaches, for example, policies in relation to using some price instruments and attitudes to indirect potable reuse of water.

Agencies should assess the extent to which a proposal may be vulnerable to uncertainty. It should identify key sources of uncertainty, their potential impacts on the investment need, benefits and response options, and strategies for dealing with uncertainty effectively. DTF recommends using a triage process to undertake this assessment.

**Figure 5: Overview of the real options triage process**

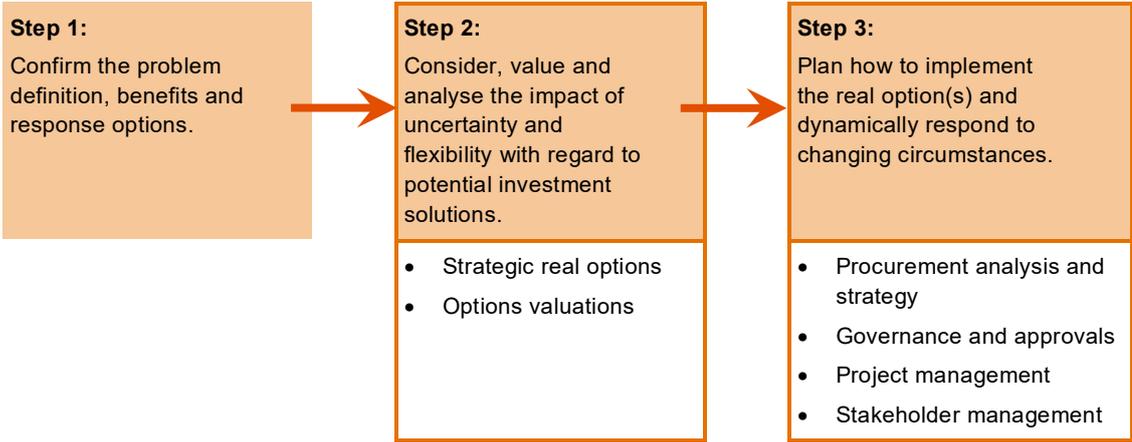


DTF recommends agencies apply this process to all investments. Any identified issues should be noted in the business case (where relevant). Where a proposal is impacted by significant uncertainty, agencies should consider using quantitative analysis techniques (such as real options analysis) to augment options analysis in the business case.

### 1.7.1 Real options

Real options analysis is an investment evaluation and decision-making framework that incorporates flexible, quantitative approaches to better manage projects that are significantly impacted by uncertainty. It can support Government to develop infrastructure investment strategies that are adaptable and better meet evolving community needs.

**Figure 6: Real options requirements in the business case stage**



When defining investment benefits, be aware that using real options can significantly alter a project pathway. This can impact Government’s ability to realise a benefit – and can even reduce or remove the need for a benefit to be realised. For those projects impacted by significant uncertainty, it may be necessary to consider how the defined benefits could be impacted by changing conditions, and the impacts this may have on achieving the intended investment objectives.

**Further information on managing uncertainty and undertaking real options analysis is contained in the Real Options Analysis technical guide<sup>1</sup>.** This guide provides practical suggestions to improve investments by building in flexibility.

## 1.8 Considering and complying with relevant government policies

There is a range of government policies that agencies may need to consider and comply with when developing an investment proposal. The following sections outline some important policies that apply to the whole of government context. However, agencies should ensure that investment proposals address all relevant policies and priorities.

### 1.8.1 Value Creation and Capture Framework

The Value Creation and Capture (VCC) Framework requires agencies to consider value creation and capture opportunities for any relevant asset investments proposals submitted for budget funding.

<sup>1</sup> See DTF’s website: [www.dtf.vic.gov.au/infrastructure-investment/investment-lifecycle-and-high-value-high-risk-guidelines](http://www.dtf.vic.gov.au/infrastructure-investment/investment-lifecycle-and-high-value-high-risk-guidelines)

**Value creation** refers to creating and delivering additional value and benefits for Victorians than might normally have been achieved from an investment. For example, when building infrastructure or developing precincts, Government can enable economic opportunities, deliver green space, community services, housing and education facilities and create more value for the community than would otherwise be the case.

**Value capture** refers to Government capturing a portion of the incremental economic value created by its investments, activities and policies. These actions may generate alternative revenue streams, assets or other financial value that Government can tap into to assist funding existing or future investments.

Investments required to comply with the VCC include:

- precinct projects;
- development of public land;
- non-ICT capital investments meeting HVHR criteria; and/or
- any other capital investment considered by Government as having potential significant value creation and/or capture opportunity<sup>2</sup>.

Where an investment proposal meets any of the above criteria, agencies are required to prepare and submit up to three documents to support project planning and business case development:

- **Statement of Intent:** a succinct overview of the project and the outcomes sought, as well as high level objectives for broader value creation and capture;
- **Strategic Value Creation and Capture Plan:** a high level, preliminary or strategic version of the detailed VCC Plan. It identifies opportunities for value creation and capture that have the potential to deliver significant value and warrant further investigation through the development of a full business case. It also identifies the resources and capabilities required to develop a robust VCC Plan for the full business case; and
- **Detailed Value Creation and Capture Plan:** covers the same content as the Strategic VCC Plan at a more robust and granular level.

At the business case stage, the project sponsor will be responsible for developing a **Statement of Intent** and a **Strategic Value Creation and Capture Plan** for any proposal meeting the VCC criteria.

In developing this Statement of Intent and Strategic VCC Plan, the intention is to provide clear, early project definition and guidance on government policy objectives for the project. This is critical to provide the authorising environment for agencies to properly explore broader value creation and value capture opportunities as part of the business case, and to guide the relevant policy trade-offs in selecting and applying identified value creation options and value capture tools.

Further information on the Value Creation and Capture Framework is available on the Department of Premier and Cabinet's website at [www.vic.gov.au/value-creation-and-capture-framework](http://www.vic.gov.au/value-creation-and-capture-framework).

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<sup>2</sup> Note that the VCC Framework represents best practice for all projects. Practitioners are encouraged to consider the VCC opportunity presented by any project over \$100 million. However, those projects that do not meet the above criteria and do not offer a reasonable VCC opportunity will not be required to comply with the Framework.

## 1.8.2 *Climate Change Act 2017* and related climate change initiatives

The Victorian Government's new *Climate Change Act 2017* commenced operation on 1 November 2017. The Act sets out a clear policy framework and a pathway to 2050 that is consistent with the Paris Agreement to keep global temperature rise below 2 degrees Celsius above pre-industrial levels. The Act sits alongside other key Victorian Government energy and climate change initiatives, including Victoria's Climate Change Framework, Victoria's Climate Change Adaptation Plan 2017-2020 and Victoria's Renewable Energy Action Plan.

There are two primary aspects of these climate change initiatives that agencies should consider when developing infrastructure investments:

- greenhouse gas emission reduction: the *Climate Change Act 2017* sets a target of net zero greenhouse gas emissions by 2050. When delivering new, or renewing/replacing existing, infrastructure, Government should think about actions it can take to reduce Victoria's emissions footprint; and
- climate change adaptation: climate change is a key uncertainty that can impact our investments. Victoria is already experiencing the impacts of climate change, with increases to average temperature and decreases to average rainfall impacting all parts of the State. When developing and delivering investment proposals, agencies should consider whether service delivery functions are vulnerable to changing climatic conditions. Practitioners should also contemplate strategies or actions that could be taken to prepare for, and adapt to, these changes, and increase the resilience of our service delivery capability and supporting assets.

Further information on the Victorian Government's climate change legislation, policies and initiatives is available on the Department of Environment, Land, Water and Planning's website at [www.climatechange.vic.gov.au](http://www.climatechange.vic.gov.au)

### **Business case information requirements for the overview**

The overview should highlight the overall story and key points of the business case, including the proposed outcomes and a high-level overview of the key dimensions of the request. It should specify:

- the problem or issue that the initiative will address;
- the merit of the proposal and how it delivers a critical need;
- what the Government will be buying, over what timeframe and the benefits/outcomes of investment for particular cohorts or areas;
- why this is the most effective and efficient way to deliver the proposed benefits/outcomes;
- if the proposal is a new focus for Government investment or builds on an existing base;
- if the proposal seeks funding to operationalise or capitalise on past capital investment; and
- any additional context (such as interface with other current or previously funded initiatives, scalability, areas of complexity and significant risks and strategies for these, any interdependencies/additional investments where the project solution will not deliver the full scope).

## 2. What is the investment case?

The preliminary business case will include some high-level information on the project options analysis, the project solution as well as some more specific considerations such as project schedule and project budget to provide confidence in the project's value for money and deliverability.

Information presented in the investment case will be tested more rigorously in a full business case than a preliminary business case. The full business case will provide extensive evidence to support the line of enquiry.

For some proposals, especially HVHR proposals, agencies may require assistance to fund the full business case.

The 'call to action' for government intervention is usually founded in market failure or where there are clear government objectives that need to be met. Market failure occurs where the market has not or cannot deliver an efficient outcome. Some issues typically identified as market failures include:

- the existence of monopoly power;
- circumstances of incomplete/imperfect information;
- external costs and benefits (known as externalities) not being taken into account by the market (e.g. pollution);
- failure of market participants to identify and/or consider cross-functional alternatives, including non-asset, demand management, optimising processes and improving productivity; and
- public goods (such as national defence) or mixed goods (such as education), where the market left to its own devices is likely to lead to an underproduction (from society's perspective) without government intervention.

Government interventions in these scenarios seek to rectify this failure, for example, by removal of barriers or provision of services.

Government intervention may also result from policy decisions, service needs or investment ideas and be justified to address distributional or equity concerns.

The checklist below is for business case developers and assessors. Its purpose is to guide the thinking in the business case as the investment case is developed and to assess proposals once complete.

**Table 6: The 16 questions for the investment case**

Problem	Benefits	Strategic response	Indicative solution
1. Is it clear what the problem is that needs to be addressed, both the cause and effect?	5. Have the benefits that will result from fixing the problem been adequately defined?	9. Has a reasonable spread of strategic interventions been identified and packaged into sensible response options?	13. Consistent with the preferred response option, has a reasonable spread of project options been analysed?
2. Is there sufficient evidence to confirm both the cause and effect of the problem?	6. Are the benefits of high value to the Government?	10. Is there evidence to demonstrate that the response options are feasible?	14. Is the recommended project solution the best value for money way to respond to the problem and deliver the expected benefits?
3. Does the problem need to be addressed now and by this Government?	7. Are the KPIs SMART and will they provide strong evidence that the benefits have been delivered?	11. Were the response options evaluated fairly to reflect their ability to respond to the problem and deliver the benefits?	15. Is the solution specified clearly and fully (all business changes and assets)?
4. Does the defined problem capture its full extent/scope?	8. Have key dependencies critical to benefit delivery been considered?	12. Is the preferred response option the most effective way to address the problem and deliver the benefits?	16. Can the solution really be delivered (cost, risk, timeframes etc.)?

## 2.1 How long-term planning relates to this stage

At the investment case stage, agencies should ensure that an identified need for an investment aligns with the agency’s long-term service planning to meet future service needs and demands, as well as its asset management objectives.

Agencies should satisfy themselves that the investment proposal has been considered in the context of a cohesive response to a service delivery challenge. Asset investment proposals should consider the requirements of the Victorian Government’s Asset Management Accountability Framework (AMAF), align with the department or agency’s asset management strategy, and be included in the asset management strategy for the department’s entire asset base.

Implementation dependencies of other investment initiatives need to be identified and coordinated.

Central to initiating a new investment is carrying out research, which may have been partially addressed in agency planning processes. This research involves analysing the:

- long-term planning data of the organisation;
- current market environment (e.g. cause of the market failure, employment levels);
- impacts on stakeholders;
- evidence of the cause and effect of the problem;
- drivers;
- current and projected trends and published forecasts;
- modelling; and
- technological developments.

## 2.2 Supporting material for the investment case

The underlying framework of the investment case will be submitted together with the following documents:

- Project Profile Model;
- investment logic map;
- benefit management plan (note this is a live document and should be refreshed at regular intervals); and
- red-rated Gateway recommendations in the Recommendation Action Plan.

### 2.2.1 The Investment Management Standard

The Investment Management Standard (IMS) is a process for applying simple, common-sense ideas and practices that help organisations to direct their resources and achieve the best outcomes from their investments.

It is grounded on three principles:

- the best way to pool knowledge is through an informed discussion that brings together those people with the most knowledge of a subject;
- the ‘investment story’ is best depicted on a single page using language and concepts that can be understood by a lay person; and
- each investment should have clearly defined benefits that align with the outcomes the organisation is seeking.

The IMS was first used to identify individual investments. Today, its uses have broadened to the point where it can now support all the primary investment decision-making functions of an organisation. The investment management map can be used to undertake the following seven practices:

- shape a new investment;
- prioritise investment proposals;
- develop new policy;
- monitor and measure the delivery of benefits;
- evaluate a program of investment;
- refocus an organisation to improve its effectiveness; and
- monitor an organisation’s outcomes.

The IMS involves a series of up to four facilitated workshops that step participants through a ‘line of enquiry’ and helps decision-makers determine whether:

- there is a real, evidence-based problem that needs to be addressed, now and by this Government;
- the benefits that will be delivered through successfully addressing the problem are of high value to the organisation and the community;
- the benefits’ KPIs are meaningful, measurable and attributable to the investment and are worth tracking and reporting;
- the way the problem will be addressed is strategic, feasible, and innovative;
- the solution is likely to be delivered within time and budget constraints; and
- the solution can be applied flexibly to manage uncertainty and adapt to changing conditions and demand.

## 2.2.2 Business case outputs from the IMS

It is expected that business case will be accompanied by the following:

- **investment logic map (ILM):** a single-page depiction of the logic that underpins a single investment. It aims to communicate the investment story on a single page using language and concepts that are understandable to a layperson. There are three different levels of ILM – for an *individual* investment, for a *program* of investment and for an entire *organisation*; and
- **benefit management plan (BMP):** a short document that specifies the benefits an investment will need to deliver to successfully address an identified problem. A benefit definition workshop is used to identify the KPIs, measures and targets that must be met to mitigate the effect of the problem. This workshop produces the first iteration of the benefit management plan that, like the ILM, evolves as the investment is shaped.

## 2.2.3 Involving stakeholders

The ILM and BMP are typically developed through workshops. It is recommended that a facilitator be used to facilitate workshops for the large investments. Project teams are encouraged to undertake preliminary analysis to support the discussion, for example, service modelling and a scan of policy and other government commitments, prior to the workshops taking place.

Prior to confirming the case for change, key stakeholders with a vested interest in the investment proposal will provide specialist judgement and opinions to help confirm the need for investment. The client should attend the workshops.

The client should bring together those people who understand the problem(s) and can provide the evidence that will validate that the identified problem(s) are real. If a project is likely to be HVHR, project teams should involve DTF in the ILM process. The number of people involved will probably be between five and eight, depending on the nature of the investment, but could be anything up to 15.

Departments may wish to undertake two additional stages of workshops related to developing a strategic response and solution. The outputs of these two further workshops are the response options analysis and investment concept brief.

## 2.2.4 The Investment Logic Map (ILM)

The ILM makes the investment case in a page, made up of the following stages:

- **the problem** – the first discussion establishes the problem that needs to be addressed. It seeks to identify the problem driving consideration of a new investment or intervention, the evidence to confirm both cause and effect of the problem, and the benefits for the organisation in responding to the problem;
- **the case for change** – the case for change aligns the problem with the rationale for why Government should care about the problem and any public commitments made in relation to the problem (for example, policies, legislation, announcements). This should remain high level and not be confused with the benefits, which are more specific to the identified solutions. No KPIs are required at this stage;

- **the benefits** – this identifies the evidence that will be needed to demonstrate that the identified problems have been properly addressed, who will be responsible for delivering the benefits and how these will be tracked and monitored. KPIs will provide the evidence and should be developed after the solution definition is developed. Revisiting the benefits to identify the KPIs (e.g. rates of childhood obesity) should also involve specifying the baseline and target (e.g. to what degree childhood obesity needs to be reduced);
- **the strategic response** – the strategic response should consider a broad range of interventions such as demand management, regulation change, repurposing assets, investing in new assets and market-based solutions. Each time there is a need to consider a new investment there is also an opportunity to substantially improve the way things will be done in the future. Innovative approaches that are better and cheaper can be explored; and
- **the solution definition** – these build on the strategic response and identify the project options ('Should the hospital have 350 or 500 beds?') or procurement options ('What acquisition model should be adopted?'). Merit is based on a balance of five factors: benefits, cost, timelines, risks, and dis-benefits.

## 2.3 Step 1: Understanding the problem

**The problem is ... to understand what the problem is. A problem can also be an opportunity that will be lost.**

One of the primary reasons that investments fail is that the basic logic for the investment was either not understood or was not shared by all the parties who needed to know. The common cause of this is that the investors themselves were not clear as to what was driving the investment decision or what benefits the investment could reasonably be expected to deliver.

Note that each problem statement has two elements, a cause and an effect, each of which should be explained and evidenced.

### **Business case information requirements for problem definition**

- Describe any context and background necessary to outline the existing service delivery environment and introduce the problem or opportunity.
- Provide details (as relevant) of how the service need is currently addressed, including:
  - any existing similar or related services currently being delivered, how they are being delivered and by who (nominating any government or private sector service delivery agencies and their locations);
  - the existing asset base and its condition, capacity and capability to support ongoing service delivery requirements; and
  - any funding commitments or other resources that support service delivery, including lapsing status.
- Outline the existing service distribution and levels, commenting on service delivery effectiveness and efficiency and any capacity or capability issues. Note any relevant relationships between the problem and the organisation's long-term service and asset planning, Government commitments and strategic priorities (including election commitments) or other relevant plans.
- Provide details of any significant prior history relevant to this investment:
  - any approaches that have been taken to address this problem in the past; and
  - any previous or current funding allocations.
- Outline the strategic case for investment – explain the investment need.
- Explain in plain English on one page the problems that the investment is intended to address. The explanation should cover the cause and effect of each problem, who is affected, how they are affected, whether the problem is immediate, transitory, ongoing or escalating.
- Identify the underlying drivers of the service need and how they are contributing to the cause of the problem. Examples of service need drivers include: demographic change (population growth/decline, population ageing and longevity, increasing demographic diversity), economic and environmental change, technology advancements, changing social expectations of service delivery, evolving service delivery models, asset condition, etc.
- Provide detailed evidence of both the cause and effect of the problems (e.g. demand forecasts with assumptions, current performance levels).
- Where detailed quantitative evidence is not available, findings of audits, reviews or other internal or external research, or other facts or examples of the problems can be helpful.
- Justify why the State should intervene as opposed to private sector/market solution, Commonwealth or local government investment.
- Give an indication of the urgency of the problems by explaining why the problems should be solved now rather than later.
- Explain the implications of delaying a response to the defined problem, such as:
  - physical or capacity limits will be reached;
  - significant reductions in the level of service (quality/quantity) will be experienced;
  - failure to meet specific Government commitments or legislative requirements;
  - requirement for urgent action at additional cost due to asset failure, system overload, etc.;
  - lead time for investment to become operational; and
  - any critical dependencies with related service requirements.
- Explore whether the problem is suited to a staged response and consider the interface with other programs underway.
- Explain whether similar needs or opportunities exist either inside or outside your organisation that might be addressed together with this proposal.
- Identify if there is any uncertainty in the nature, extent or definition of the problem/opportunity or the ongoing need for the investment:
  - Are there any interdependencies or external factors that could materially impact the nature or extent of the problem or opportunity, or the underlying service need, in the future?
  - If these uncertainties are realised on the investment, what would be their impact on the ongoing demand or need for the investment?
  - Is there sufficient uncertainty in the nature and extent of the problem to warrant this business case being informed by real options analysis?
- Detail the impact of the problem in the broader service context.

## 2.4 Step 2: Case for change (benefits)

Benefits are the direct advantage gained by Victoria as a result of undertaking a particular investment and solving the problems. If an investment would deliver benefits that do not contribute to the public outcomes, then there is no basis of proceeding with the investment.

Benefits should:

- align to organisational outcomes, long-term plans, policies and objectives;
- be portfolio or agency specific, or whole of government, as the case requires; and
- be real in nature, attainable and be a direct consequence of the proposed investment.

Benefits are able to be realistically substantiated when they are underpinned with meaningful, measurable and attributable key performance indicators (KPIs), and appropriate research.

### **Business case information requirements for case for change (benefits)**

Identify the key benefits (high-level economic, social and environmental benefits) and the desired outcomes that flow if the problem(s) are solved.

Clearly outline any unrealised benefits or negative consequences resulting from not addressing the problem.

- Outline how business as usual will impact on government policies and strategies.
- Outline how or why the benefits reflect government priorities and the department's corporate, strategic and/or long-term planning documents (e.g. asset management strategy) and how this investment will help to advance the Government and/or organisation to meet its objectives. This might include reference to the size and timing of those benefits.
- Define the measures to be used to show whether the benefits have been delivered.
- Outline any dis-benefits that would follow from addressing the problem.
- Outline any key interdependencies critical to benefit delivery and strategies required for management. For staged investments this may include successful completion of earlier stages.
- Show that any uncertainties, risks, constraints or key dependencies critical to benefit delivery have been considered.

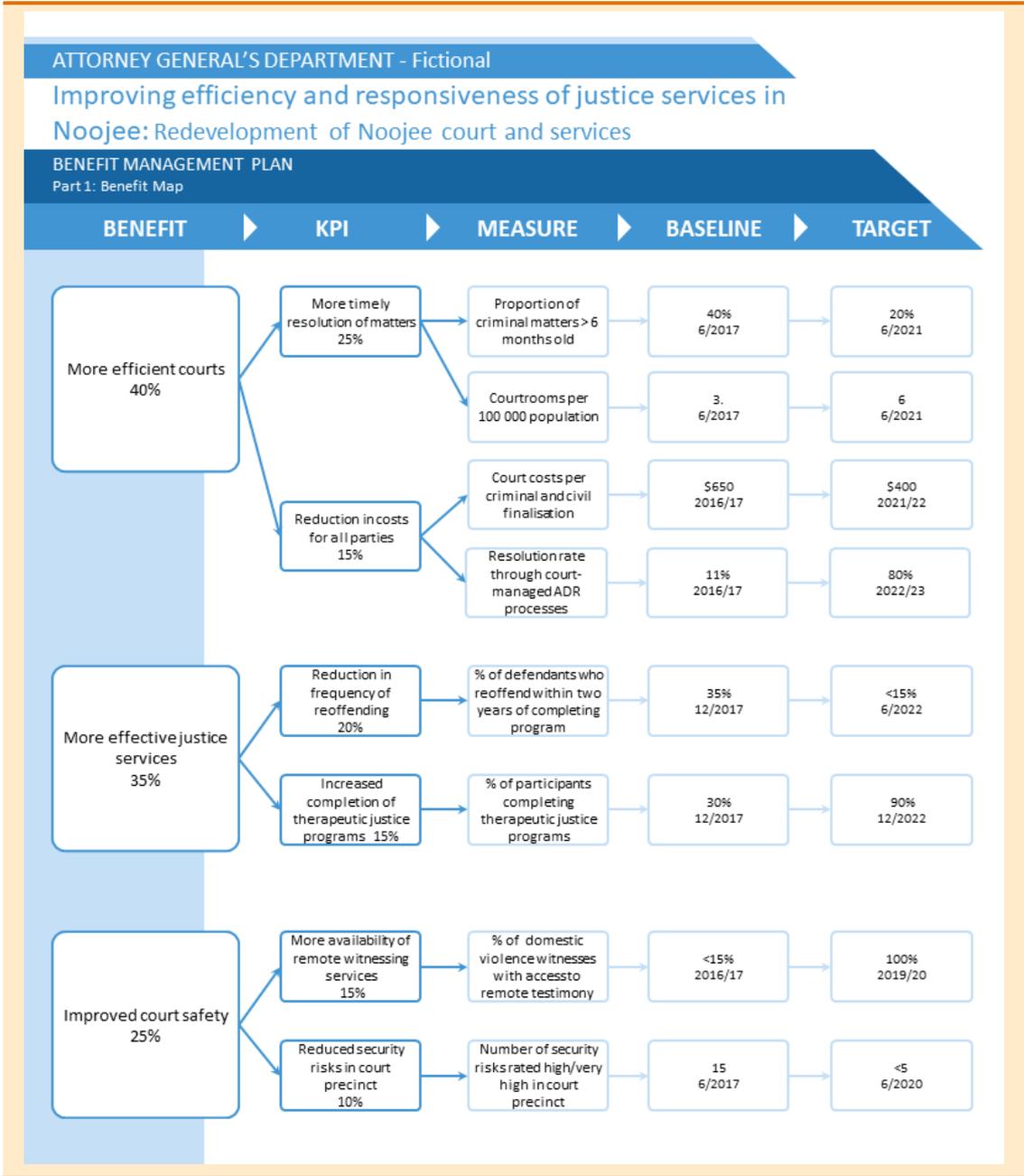
A fictional example for how this might be done is shown below.

### **Definition of the benefits (fictional justice example)**

#### **Benefits to be delivered**

Three benefits flow from solving the problems:

1. More efficient courts – 50 per cent  
The court system is currently unable to meet the growing and changing demand for court services, leading to delays and increasing costs for all parties. If the problems are solved, a direct benefit will be a decrease in time and costs associated with processing caseloads.
2. More effective justice services – 35 per cent  
Assets that are not able to be easily adapted to meet evolving service delivery requirements. The court system's ageing asset portfolio is not suited to modern service delivery modes and is undermining programs to reduce recidivism. Modernising the asset base is likely to increase the number of participants completing therapeutic justice programs and reduce the percentage of defendants who re-offend.
3. Improved court safety – 15 per cent  
Outdated facilities are unable to support current security requirements and protect court users. Improving court safety and security will enable improved remote witnessing and digital evidence presentation and improve physical separation between parties and court activities.



### 2.5 Step 3: Response option development

Each time there is a need to consider a new investment there is also an opportunity to improve the way things will be done in future. Instead of just solving problems the way they were solved 'last time', there is an opportunity to consider innovative approaches that are better and cheaper.

Agencies should identify potential strategic interventions first by exploring a range of alternatives under the following headings:

- change demand (e.g. measures to reduce demand for services);
- improve productivity (e.g. change service delivery mechanisms); and
- change supply (e.g. add capacity to meet increased demand).

Interventions can be implemented via:

- **non-asset investments:** to deliver new or additional service capacity without creating the need for additional assets;
- **asset enhancements:** using operational and non-operational assets to meet the need, including but not limited to:
  - re-purposing assets;
  - improving, optimising and re-examining operations and maintenance strategies to improve productivity and performance of current assets; and
  - improving the performance of assets through modification/upgrade, enhancement, life extension, sustainability, de-bottlenecking and supply chain strategies;
- **new asset acquisition:** only investing in the development or procurement of new assets that are required to support service delivery objectives; and
- **market-based solutions:** that use market mechanisms such as pricing, property rights and competition to solve common problems. Some examples of market-based solutions are:
  - pricing to manage demand, e.g. user charges;
  - introducing competition into government service delivery, e.g. through private sector provision; and
  - implementing incentive structures for purchasing or service delivery arrangements.

Any intervention should be developed following consideration of benchmarks to inform expected performance and value for money outcomes.

Agencies can then group strategic interventions into response options, which are a mix of high-level strategic interventions that could be taken to respond to an identified problem.

Agencies should identify and explore a range of possible response options. Only after agencies have identified a preferred response option should project options be considered. Project options explore how the preferred response option might be implemented. They might be business changes that could be made or assets that could be acquired as a way of delivering the benefits expected from an investment (as specified in a benefit management plan) or involve a combination of non-asset and asset responses. These must be consistent with the identified strategic response.

However, at this stage of the analysis agencies are asked to focus solely on developing the response options to the identified problem; project options will be addressed later in the analysis.

## 2.5.1 Defining the base case – the first response option

The 'base case' is the first response option defining what will occur if continuing under the current policy settings. The base case is a realistic option that could be used for future service delivery.

There are situations when determining the base case isn't straightforward. Sometimes a 'do nothing' (i.e. spend nothing) base case is possible, in which case base case represents the minimum cost of using the existing arrangements to deliver services at current levels and standards. The Government's current policy settings should be assumed to be maintained on a per capita basis, including investment levels, unless there is an explicit policy or reason why this should not be the case.

### **Business case information requirements for response option development**

- Describe the method and criteria used to select, assess and rank response options, including assumptions and constraints.
- Describe and model the base case, including information on the present service delivery performance, status and condition, assumptions and use of existing infrastructure.
- List and explain potential strategic interventions.
- Explain how the potential strategic interventions can be packaged into response options.
- List (and explain) any response options considered but then removed prior to the response options analysis.
- Detail the evaluation of the response options to determine the recommended response option.

## 2.6 Step 4: Project options assessment

### 2.6.1 Choosing project options

Agencies need to develop and set out realistic and feasible project options to address the underlying problem and meet the overall **investment benefits**.

These project options should be aligned to the preferred response option and may be comprised of service changes, assets or other actions proposed. The initial project options scoping looks at a variety of scoped asset and non-asset solutions for the purpose of selecting the preferred project option.

**Business cases that are weakest in this area often propose just three options: do nothing, do something that is unfeasible, or do what the business case is proposing.**

This strategy should be avoided, and Government should be able to consider several feasible alternatives.

Conversely, developing and evaluating too many options is expensive and time consuming. Agencies are encouraged to select a manageable shortlist of project options from those initially considered. Do not spend time developing and evaluating options unlikely to be pursued. If project options have been removed at any stage, briefly outline what those options were, and why they were not further analysed.

## Types of project options

The preferred project option should be aligned to the response option and demonstrate that the solution aligns service demand or needs to the assets required to meet that service demand. Investments to address service delivery challenges may include one or more – or even all – of the following:

**Non-asset investments:** to deliver new or additional service capacity without creating the need for additional assets, including but not limited to:

- demand management alternatives, such as pricing structures; and
- changing regulations or policies.

**Asset enhancements:** using operational and non-operational assets to meet the need, including but not limited to:

- demand management alternatives, such as pricing structures; and
- changing regulations or policies.

**Each project option may require a combination of assets and non-assets in order to deliver the preferred response option.**

## Private sector involvement considerations

When considering private sector involvement consider:

- whether a competitive market exists or can be established to provide the proposed services;
- how private sector provision compares to the cost and quality of provision by the public sector after taking into account the after-tax rate of return required by the private sector;
- the impact of private sector involvement upon the State's financial position; and
- risks of the investment and the degree to which risks can be shared with the private sector.

Indicators that the private sector may add value to an investment proposal include:

- the size of the investment;
- operating efficiencies of the private sector; and
- benefits of ownership of assets accruing to the private sector.

### **Business case information requirements for project options selection**

- Describe the method and criteria used to select, assess and rank project options, including assumptions and constraints.
- Describe the project options and the rationale used to select the project options.
- Demonstrate that project options considered were each feasible and ranked fairly in arriving at the preferred project option.
- Ensure that asset, non-asset, private sector and market-based solutions were considered in selecting project options.

### **Choosing project options (fictional transport example)**

A business case should outline the basis for selecting the included project options. If there are technology, stakeholder, policy, legal and/or other constraints that make certain options unfeasible, then these should be explained. This case study illustrates how this requirement might be addressed, for a fictional road bypass project.

#### **Project options considered**

Three project options are presented for a bypass of Smithville (the preferred strategic response). All project options run to the east of Smithville and are a minimum 5km from the city centre.

Alignments to the west of Smithville, or to the east but closer to the city centre were not preferred due to:

- The Smithville industrial precinct, in the northeast, is a common origin/destination for heavy vehicles. A bypass route to the west of Smithville would be used less, reducing the project's key benefits.
- A route to the west needs to avoid the Namillian State Forest. To do this the route must cross two ravines requiring costly bridges and significant earthworks. Options to the east have significantly lower cost.
- A number of important sites (including two schools and a recreation centre) are in the south east of Smithville, sited up to 4km from the city centre. Feasible routes to the east run close to these facilities raising significant community concerns about increased noise and pollution.

## **2.6.2 Describing project options considered**

The full business case template asks agencies to describe project options prior to analysing them. Agencies should be able to describe project options, critical assumptions, asset and output options and at least one market-based project option where possible. Note that critical assumptions or constraints must be project option-specific.

Critical assumptions and constraints include:

- revenue drivers, capital and operating costs, social and environmental factors, financing constraints, and availability of resources and expertise;
- known or emerging constraints or windows of opportunity affecting the proposed initiative; and
- regulatory, legislative, policy issues and relevant Acts that may impinge on the proposal.

### **What is the extent of uncertainty that stems from these factors?**

These assumptions or constraints should be considered as part of the sensitivity analysis in the integrated assessment (see section 2.6.12).

If uncertainty and flexibility were identified in the delivery of the solutions, identify **real option alternatives** within the project options.

#### **Business case information requirements for describing the project options**

- Scope of each project option (including assets and non-assets of each project option).
- Critical assumptions or constraints and windows of opportunity for each project option.
- If uncertainty and flexibility were identified in the delivery of the solutions, identify real options alternatives.
- Any potential for third party revenues.
- Outline project options considered but not evaluated and state rationale for non-consideration.

### **Describing project options (fictional transport example)**

This case study illustrates how a project option might be presented in a full business case, after the preferred response option has been identified. The recommended response option is construction of a road bypass of Smithville. The fictional project option presented below details one practical option for the bypass.

#### **Project option 2 – description**

Option 2 is a 21km bypass, to the east of Smithville, connecting Phillips Highway between Mitchell and Williams Roads. The bypass includes a 4km duplication of the existing highway north of Smithville providing two lanes each way between Williams and Walsh Roads as illustrated in Figure X. Specifically, it includes:

- a freeway standard bypass to the east of the City of Smithville;
- duplication of the existing Phillips Highway between Walsh and Williams Roads, including new local access roads;
- diamond interchanges at Mitchell Road and Walsh Road with bridges over the freeway and ramps giving full access in all directions;
- an overpass taking Pitchford Road across the freeway;
- an underpass taking Harvey Road beneath the freeway;
- upgrading sections of Langford Road, Pitchford Road and Harvey Road;
- planting of trees (to serve as noise barriers) on the Smithville (west) side of the bypass; and
- signalling and signage as required.

The bypass would have maximum gradient of 3.5 per cent across the entire length of the route. With this bypass, through traffic between Melbourne and the Goulburn Valley would no longer enter Smithville. Similarly, heavy vehicles travelling between Melbourne and the Smithville industrial centre would access the Phillips Highway at Williams Road and so be diverted from the city centre. During the most congested periods this is likely to reduce travel times on the Phillips Highway through Smithville by about 25 minutes. The bypass would be developed in a single phase of construction. Construction would commence in November 2013, with the bypass scheduled to open in late 2015.

### **2.6.3 Understanding impacts and opportunities of options**

The options analysis section should communicate significant impacts of project options considered, including social, stakeholder, environmental, financial and economic impacts and opportunities.

### **2.6.4 Stakeholder impacts**

Stakeholders impacted need to be identified and considered in the context of the option shaping and selection.

#### **Business case information requirements for stakeholder impacts**

- Identify and map stakeholders.
- Outline key stakeholder positions, impacts and the level of consultation for each project option.

### Stakeholder impacts (fictional tourism example)

This case study illustrates the type of information that might be provided on stakeholder impacts.

#### Stakeholder identification

Key stakeholders include Victorian Government agencies (Regional Development Victoria (RDV) and Tourism Victoria), various businesses and community groups, including the local indigenous community. Stakeholders are identified in the table below with the nature of their interest explained.

Stakeholder	Impact and interest in project	Consultation to date – option preference
RDV and Tourism Victoria	RDV and Tourism Victoria are agencies with a direct interest in this proposal. RDV delivers regional economic development programs complementing this proposal. The proposal links to Tourism Victoria's strategy for marketing the Outback region.	Ongoing dialogue with these agencies indicates their support for the project with a preference for option 1. They are keen to ensure it complements other initiatives in the region.
Local businesses and community groups including Indigenous communities	The site of the proposed investment links its business and tourism districts. This prime location means most members of the local community will be impacted or take a close interest. Some community groups may be negatively impacted during construction. Community groups are likely to support the project, subject to effective engagement and management of disruption to groups using existing facilities.	Consultation has largely been through presentations and correspondence through local council processes. There is broad acceptance of the problem and benefits, but diversity in option preferences.

## 2.6.5 Social impacts

### Business cases information requirements for social impacts

- Provide a high-level overview of the spread and depth of significant social issues, impacts or opportunities specifically relevant to particular project options.
- These impacts may be the deliberate intention of the proposal or an unintended consequence.
- Distinguish the measurable and non-measurable aspects and the relevance of these to the investment.

## 2.6.6 Environmental impacts

When looking at investment in sustainable initiatives, agencies should consider opportunities for investing in sustainability as long as it contributes to value for money or a stated government policy. Key themes and areas of focus of the guidance include:

- linking investment decisions to clearly identifiable benefits (quantified or otherwise);
- a whole of life investment approach, including in the cost benefit appraisal;
- building in sustainability from the concept stage by providing a set of prompts to consider; and
- improving the robustness of sustainability elements towards clearly defined performance.

#### Business case information requirements for environmental impacts

- The extent and nature of short and long-term environmental consequences.
- Opportunities to deliver environmental benefits (or address risks) relating to government objectives (e.g. through the incorporation of conservation and sustainability).
- The measurable and non-measurable aspects and their relevance to the investment.
- Any uncertainties or risks stemming from these impacts and issues, and strategies to address them.

### 2.6.7 Financial modelling

**A summary of the financial modelling process and outcomes for each project option is required. Costs are specified to the level of a concept estimate. The costs need to be realistic, evidence based and defensible.**

Capital, operational costs, revenues and cash flows should be modelled over a sufficient period of time to consider whole of life impacts and to allow meaningful option comparison. This section should also detail any biases, limitations and deficiencies of the analysis, as well as a brief description outlining the basis for this estimate and any key cost assumptions.

Where a project option will result in substantial changes to output costs (increase or decrease), the estimated impact should be addressed.

If a real options analysis is being applied, costings will need to be determined for each real option alternative. The following table outlines the difference between the economic and financial analyses.

Table 7: Difference between economic evaluation and financial analysis

	Economic analysis	Financial analysis
<b>Focus</b>	Overall social welfare/value for money – net present value/benefit-cost ratio.	Cash flows, funding requirements and funding sources.
<b>Purpose</b>	Relative contribution of option(s) to net social welfare compared to a base case.	The additional net financial impact to the organisation across time.
<b>Inclusions</b>	All allocative resource flows (all incremental and new costs and benefits from society's perspective) including market (such as most of what is included in a financial analysis) and non-market-based impacts (e.g. externalities).  Costs and benefits occurring in different time periods are 'discounted' to their present values using the recommended discount rate.	Direct capital, revenue and output financial and accounting impacts (e.g. depreciation and Capital Asset Charge).  Costs and benefits occurring in different time periods are 'discounted' to their present values using the recommended discount rate. Refer to the <b>Project budgets</b> technical guide for further information.
<b>Exclusions</b>	<ul style="list-style-type: none"><li>• GST and taxes</li><li>• Depreciation</li><li>• Sunk cost</li><li>• Interest and financing costs</li><li>• Transfer payments</li></ul>	<ul style="list-style-type: none"><li>• GST and taxes</li><li>• Sunk costs</li></ul>
<b>Period of analysis</b>	Service term or period sufficient to consider whole of life impacts of the project.	Service term or period sufficient to consider whole of life impacts of the project.

Cost estimates for potential investments are an important component of the investment case stage. While it is recognised that this is an early stage of an investment's development, the cost estimates should be sufficiently reliable to provide an 'order of magnitude' of the final cost, expressed as a cost range (\$x-\$y million). The cost estimate will be used as a component of the analysis to determine which project investment options should be considered further in the full business case.

The estimated full capital cost of the investment should be included with a brief description outlining the basis for this estimate and any key cost assumptions. Where the proposal will result in substantial changes to output costs (increase or decrease), the estimated impact should be addressed.

### **Financial analysis**

Financial analysis is an estimate of all investment-specific government-wide cash flows expected to occur over the life of the investment, in other words what the investment will cost and how affordable it is. If uncertainty and flexibility exist within the investment, a real options approach should be used to identify the expected net present value (NPV) of the investment.

The financial analysis focuses on the net cost of options to be appraised in the economic analysis. These costs and benefits are assessed relative to the base case. Both the 'financial' perspective and the 'economic' perspective need to be assessed, along with risk and uncertainty in providing decision-makers with a clear picture of the factors affecting the investment decision.

#### **Business case information requirements for financial analysis**

- A description of the costing methodology used to establish the TEI estimate.
- A statement addressing the scope of estimates for project options.
- An explanation of key assumptions, such as:
  - assumptions used to develop the estimated project cost for each project option;
  - estimated unit costs of the project option. Where possible include costs per unit of output, e.g. cost per hospital bed, and building unit, e.g. cost per square metre;
  - relevant benchmarking of other projects, assets, facilities if similar work has been undertaken before; and/or
  - component costs, such as industry accepted rates or reliable unit costs, e.g. cost/km.
- Annual capital and output cash flows for each project option and a comparison of NPVs.
- Any biases, limitations and deficiencies of the analysis.

### Financial analysis of project options (fictional hospital example)

Business cases assess both the capital and operating costs of the project options and compare these in net present terms. This case study illustrates how the financial analysis of hospital expansion options might be presented. If uncertainty exists, this will need to be done for each real option, and then compared on an expected NPV basis.

#### Financial analysis

The following table presents the estimated capital costs for the project options. These consist of a base cost estimate, a base risk allocation and a contingency. The capital cost of the base case is zero, so it is not shown.

Capital cost estimates (\$'000)	Option 2	Option 3	Option 4
Base cost estimate			
• Construction works	\$48 700	\$72 300	\$90 300
• Other	\$13 500	\$19 600	\$24 200
• Total – base costs	\$62 200	\$91 900	\$114 500
Base risk allocation			
• Cost escalation	\$5 210	\$7 750	\$9 750
• Other project risks	\$2 490	\$3 650	\$5 350
• Total – base risk allocation	\$7 700	\$11 400	\$15 100
<b>Project cost estimate</b>	<b>\$69 900</b>	<b>\$103 300</b>	<b>\$129 600</b>

Operating costs have been modelled in the table below using assumptions and inputs as previously outlined. A copy of the detailed financial model is provided at Appendix X. The table below summarises increases in operating costs over 25 years from the expected opening date in 2012–13. All costs are incremental and presented in net present terms.

Operating cost estimates (2012–13 to 2037–38)	Option 2	Option 3	Option 4
Salaries and wages	\$46 092	\$57 832	\$70 217
Medical and surgical expenses	\$71 328	\$93 097	\$101 685
Other consumables	\$40 530	\$52 904	\$57 780
Facilities, maintenance and contracts	\$25 620	\$29 463	\$32 281
Overhead costs	\$30 606	\$35 197	\$38 564
Risk adjustment	\$15 338	\$17 687	\$13 559
<b>Total operating costs</b>	<b>\$229 514</b>	<b>\$286 180</b>	<b>\$314 085</b>
<b>Total net present cost</b>	<b>\$304 914</b>	<b>\$397 680</b>	<b>\$453 485</b>

The estimated incremental net present costs of the project options (using a discount rate of 8 per cent).

## 2.6.8 Economic impacts

Economic impacts in this instance refers to impacts on key economic drivers such as productivity, workforce participation and unemployment. The impacts of each project option on society as a whole are compared as part of an economic evaluation (e.g. via a cost benefit analysis).

Economic impacts can be identified quantitatively through economic modelling or in a qualitative manner (e.g. by describing possible changes and their likely order of magnitude). Data is available from the Australian Bureau of Statistics and other sources.

### Business case information requirements for economic impacts

- Outline all significant economic impacts and opportunities for each option.
- Distinguish the measurable and non-measurable aspects and relevance to the investment.

## 2.6.9 Economic analysis

The assessment of economic impacts outlines what Government is 'purchasing' for its investment in terms of the **net benefit to society**.

Further information on economic analysis is contained in the **Economic Evaluation** technical guide.

### Scalable analysis

The effort invested in carrying out economic analysis of project options should be scaled to the size, complexity and nature of the proposed investment. Estimates and data used should be evidence based and defensible.

### Outline assumptions/sources of information

Estimates will be given more weight if different methods give similar results, or if the study has been replicated by other researchers with similar results. Sometimes the use of cost or benefit ranges may be appropriate. In any case, the assumptions and sources of information used in the economic and environmental assessment should be clearly set out.

### Select methodology

**Cost benefit analysis (CBA) is the preferred methodology** for conducting the economic assessments. CBA focuses on assessing the marginal value of an investment to society, to the extent that costs and benefits can be monetised. CBA does not need to be performed for low-cost projects where the impacts are difficult to monetise.

CBA determines whether an investment makes a sufficient contribution to society's welfare to justify the expenditure. These impacts include both market and non-market specific impacts in the areas previously described (i.e. social, environmental and economic). The net present value assessment measures the value of the investment to society relative to the base case. It should be used for medium to high-cost projects where the majority of costs and benefits are captured in the CBA.

**CBA should be used for investments wherever possible to assess monetised benefits.**

**Computable general equilibrium (CGE)** uses real economic data to estimate the economy-wide impacts of a proposed project or policy change. A CGE model only includes market-based goods and services (not non-market goods). It should be only be used to complement a CBA. It is usually only appropriate for very large investment projects.

**Cost-effectiveness and least cost analysis:** this partial cost benefit approach that compares the relative costs of different options in reference to a specific agreed outcome. A cost-effectiveness analysis expresses the result in terms of the average cost per unit of effectiveness. A least cost analysis shows the total cost of each option.

**Significant, difficult to monetise economic costs or benefits need to be evaluated separately from the NPVs or benefit cost ratios to help determine the preferred project option. This is achieved through an integrated analysis.**

**If the vast majority of costs and benefits are captured in the CBA, then the NPV/benefit cost ratio forms a major part of the project option selection.**

### **Quantify and monetise costs and benefits**

While there is a strong preference for all project option impacts to be monetised (to facilitate CBA), there are occasions when some social, environmental and economic impacts are difficult to measure due to the cost involved relative to the impact being measured or because there are no reliable techniques or relevant default values readily available. CBA and other economic evaluation techniques do not go beyond assessing monetised impacts. For example, qualitative (e.g. aesthetic value) effects are not captured. Yet these factors can be important, especially for investments with social and/or environmental objectives.

The overall economic evaluation should include (with reliability being the key driver):

- the impact in quantifiable monetary terms;
- the impact in a non-monetary quantity allowing comparison between project options; and
- unquantifiable (qualitative/described) impacts.

Impacts should only be assigned a monetary value when this is done in a robust and neutral manner in line with the appropriate use of existing widely accepted valuation techniques or default values. If impacts cannot be assigned monetary values, then they should be described in quantitative/qualitative terms.

**Sometimes it is difficult to monetise benefits; however, agencies should strive to monetise impacts in a defensible, neutral manner wherever possible.**

Valuation techniques include:

- **Market-based valuations:** market-based valuations infer a price by examining consumer behaviour and/or prices in a similar or related market. Techniques include defensive expenditure, replacement cost and productivity method.
- **Revealed preference:** the revealed preference method seeks to find out how much consumers spend on goods and services in similar or related markets by observing the choices. For example, valuing the impact of flight path noise by comparing prices of similar homes under the flight path with those removed.

- **Stated preference method:** this approach is useful where there is no other method available to monetise a particular cost or benefit. Stated preferences are obtained by specially constructed questionnaires and interviews designed to elicit estimates of the willingness to pay (for) or the willingness to accept a particular outcome.
- **Benefit transfer method:** this method adopts a value from an existing body of research as a proxy value for use in the CBA. This method may be used for assessing health and environmental impacts.

### Geographic focus of impacts

In most cases, the non-financial impacts should focus on impacts on the Victorian community/economy/environment. One exception may be where the primary objectives/drivers of the investment are distributional (i.e. where there are equity objectives). For example, the Government may have explicit policy priorities to promote economic development in a certain region. The analysis may therefore focus on the impacts on that particular region rather than the whole of Victoria. The analysis should note this restriction, but note the impacts on Victoria. There may also be projects seeking federal co-funding where incorporating national benefits is appropriate.

### Distributional impacts

Governments typically wish to know how proposals will affect different groups in society. Distributional impacts refer to how costs and benefits are allocated across these different groups in society. Projects may have uneven effects on different people according to income level, age, gender, ethnicity, location, health or skill, or other factors. Projects can also have impacts on different industries.

A CBA should not directly include distributional (transfer) impacts in the overall result (NPV or BCR). However, a description of the final distributional impacts of each proposal on various sections of society should be provided to decision-makers along with the overall results. This could include the impact on different income groups, industries and geographical areas.

### Discount impacts back to present values

Discounting ensures that costs and benefits from different time periods are assessed using their present values. It reflects the opportunity cost of investing in a particular project. The discount rate used in public sector project evaluations should reflect the risk profile associated with the project. Further information on the discount rate is included in the **Economic Evaluation** technical guide.

### Choose a quantitative assessment tool

**Net present value (NPV):** NPV is the preferred quantitative assessment tool when assessing project options. Nevertheless, the benefit cost ratio should also be reported to provide decision-makers with additional relevant information.

The NPV measures the present value of net benefits. It is calculated as the present value of all benefits minus the present value of all capital and recurrent costs (including externalities) within the appraisal period for the project.

## **NPV = PV benefits – (PV of capital plus recurrent costs) + PV of other impacts**

Present values are discounted as outlined in the **Economic Evaluation** technical guide.

The NPV is used to:

- rank project options based on their magnitudes; and/or
- accept or reject project options.

**Benefit cost ratio (BCR):** this is the present value of all benefits divided by the present value of costs. A BCR that is greater than one implies a positive NPV and the project should therefore generally be acceptable to proceed. The BCR should be reported with the NPV, but is not recommended as the only quantitative assessment tool used because it is biased towards projects with early returns and small projects. The results from the BCR should be considered with the NPV results.

### **Potential problems in economic (and financial) assessments**

**Optimism bias:** this means underestimating future costs and overestimating future benefits and timelines. The assessment should state how cost, timing and benefit estimates were developed and rigorously tested.

**Objectivity can be enhanced by having an expert, independent of the area promoting the investment, to undertake the analysis.**

**Double counting:** impacts can be accidentally double counted. This is usually because they are inherently reflected in the pricing of other benefits. Another error is counting costs as benefits. For example, the use of resources such as labour is often counted as an employment benefit. However, this almost always has a cost (i.e. an opportunity cost) if such resources can be used elsewhere in the economy.

### **Unanticipated impacts and ignoring non-market impacts**

Many potential costs and benefits are unanticipated at the time of project evaluation. Non-market impacts are generally harder to anticipate and quantify and are not more likely to be overlooked. Nevertheless, listing and estimating all relevant costs and benefits early in the process, as well as affected parties, should be attempted.

#### **Business case information requirements for economic impacts and evaluation**

- Identify the basis for costs and benefits for project options.
- Describe the economic assessment methodology.
- Quantify and monetise (wherever possible) costs and benefits at a level of accuracy consistent with 'concept estimates' level, as a minimum. The level of accuracy should be determined based on the scale and complexity of this investment.
- Provide assumptions and precedent projects to justify costs and benefits used.
- Agencies should discount impacts back to present values using the recommended discount rate.
- An appropriate quantitative assessment tool (e.g. NPV or benefit cost ratio) should rank the project options as a significant component of the project option selection.

## 2.6.10 Risk assessment in response options assessment

The risk assessment focuses on each project option's risks. Agencies should choose a methodology for identifying project risks, mitigation treatments as well as a method of evaluating the risks as part of the project option assessment.

### **Risk assessment in response options assessment (fictional hospital example)**

A business case describes the process through which risks of project options have been assessed and addressed. This can provide assurance that project risks are well understood and reflected in cost estimates. This case study provides an example of how this requirement might be met for a fictional new hospital facility.

#### **Risk comparison**

Project option risks were identified and quantified through a staged process involving two project risk workshops. The workshops included two external experts and senior staff from the Department of Good Health. The initial workshop confirmed generic project risks and developed a draft risk register in the same format as hospital project Y. A second workshop was held to quantify risks for each project option to include in the financial cost estimates. At the workshop:

- the risk assessment framework was confirmed. This involved high-level assessments of the likelihood (probability of occurrence) and the consequence (impact on costs) of each risk, for each project option;
- major project risks for each option were assigned as impacting on capital or operating costs or both; and
- risks were assessed within this framework, based on the professional judgement of workshop attendees, and taking into account the extent risks could be mitigated through management strategies likely to be deployed for each option.

Risks that were minor and difficult to quantify were classified as non-quantifiable and recorded as such. This workshop produced expected values of project risks to serve as financial risk adjustments for each option.

The final risk adjustments were validated through a comparison against benchmarks for similar projects. The risk analysis has been incorporated into the financial analysis as a cost over and above the base cost. The contingency for each project option was confined to matters outside the risk assessment to prevent risks from being double counted.

### **Business case information requirements for risk assessment of project options**

- A description of the risk assessment methodology undertaken.
- Outline the risk profile of the investment, including risk causes, events and responses/mitigation strategies.
- Summarise the key risks to incorporate into the integrated analysis of the project options.

### 2.6.11 Options analysis and uncertainty

While a CBA can help deal with risk and uncertainty associated with particular impacts through the use of techniques such as sensitivity analysis and scenario analysis, there may be a need for a more in-depth approach when faced with significant uncertainty.

Where it has been demonstrated that this investment is subject to significant uncertainty, real options should be used in the analysis. For instance, if there is uncertainty regarding the NPV of a project option, it can be difficult to distinguish from alternatives. A low-risk, low NPV project option may be preferred to an alternative with higher NPV but more uncertain net benefits. Real options can be used to determine the preferred project option.

For each project option that is subject to uncertainty, a strategy for **responding to that uncertainty** should be developed in the form of a series of decisions. Those decisions may be to:

- grow or accelerate the investment on the basis of new information or under more favourable investment conditions;
- abandon, contract or delay the investment under less favourable conditions; and
- switch inputs or outputs for instance in the event of changes in prices or demand.

The **Real Options Analysis** technical guide provides practical guidance on applying real options.

#### **Real options economic evaluation (fictional transport example)**

Where uncertainty exists, the economic evaluation should be conducted using real options.

##### **Detailed CBA**

In this study there are a number of uncertainties. For instance, Project Option 2 passes near residential areas using trees for noise suppression. Modelling indicates that this has a 75 per cent chance of providing the necessary noise suppression. If it does not provide adequate suppression, the construction costs will increase by 22 per cent to take into account the need to retrofit the solution. Alternatively, the road could be redirected further away from the residential areas, in which case the costs would increase by 5 per cent if the suppression is successful, or 30 per cent if not. Redirection by itself has an 85 per cent chance of successful noise amelioration.

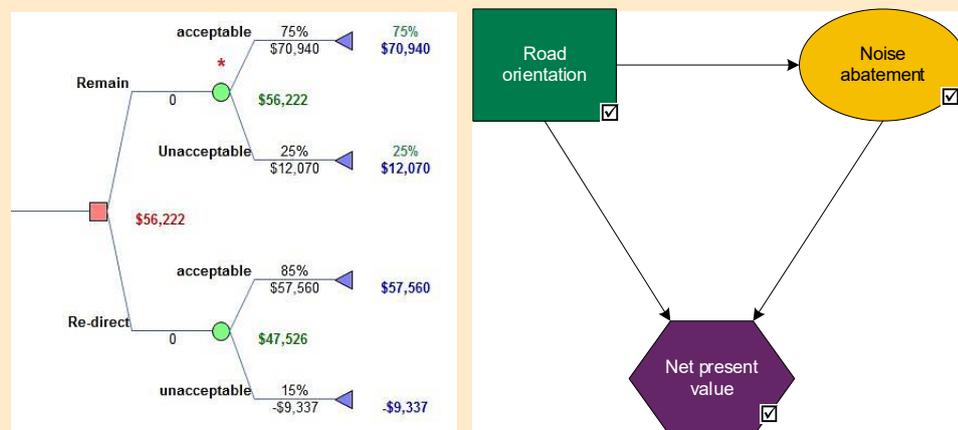
Item	Option 1	Option 2	Option 3	Option 4
	No redirection No extra suppression	No redirection Extra suppression	Redirection No extra suppression	Redirection Extra suppression
<b>Benefits – monetise</b>				
Travel time savings	\$421 325	\$421 325	\$421 325	\$421 325
Vehicle operating cost savings	\$235 050	\$235 050	\$235 050	\$235 050
Accident cost savings	\$4 500	\$4 500	\$4 500	\$4 500
Savings in other externalities	\$52 605	\$52 605	\$52 605	\$52 605
Asset residual value	\$61 650	\$61 650	\$61 650	\$61 650
Total monetised benefits	\$775 130	\$775 130	\$775 130	\$775 130
<b>Costs</b>				
Construction costs	\$267 591	\$326 461	\$280 971	\$347 868
Operations and maintenance costs	\$436 599	\$436 599	\$436 599	\$436 599
Total cost	\$704 190	\$763 060	\$717 570	\$784 467
<b>Benefit cost ratio</b>	1.10	1.02	1.08	0.99
<b>Net present value</b>	\$70 940	\$12 070	\$57 560	-\$9 377

The decision tree below indicates that this project option actually has an expected NPV of \$56 222. The other project options may have different uncertainties, but a similar process would be used. It is the expected values that would be used in the comparison of project options in the event of significant uncertainty. Uncertainty may exist in both benefits and costs.

The preferred real option is to keep the current alignment of the road and depend on the current noise abatement strategy. What is shown is the potential for cost escalation if that strategy is unsuccessful, but that realigning the road is less effective than retrofitting a solution.

The influence diagram shows that the net present value is affected by the decision made and the chance event (i.e. that noise abatement may or may not work), and that a chance event applies to each of the decision alternatives.

This analysis should be conducted for all project options.



## 2.6.12 Integrated analysis

The purpose of the integrated analysis is to combine each project option's economic, environmental and financial impacts, risk and uncertainty. Communicating what may be a vast amount of information and complex analysis in a digestible form helps with quality decision-making. If most of the costs and benefits are captured in the CBA, then the NPV/BCR forms a major part of the project selection and an integrated analysis does not need to be performed.

Integration should only be undertaken where the agency is satisfied of the quality of the information and the analysis available.

**If any scoring or weighting is used, the agency must be satisfied it is robust and transparent and will stand the critical review of independent third parties.**

Agencies should present cost benefit analysis results and additional information clearly and transparently in business cases. Information needs to be presented in a manner that decision-makers and relevant stakeholders without technical expertise can understand.

### **Business case information requirements for integrated analysis**

- Outline the method used for undertaking the analysis.
- Provide an overview of the analysis.
- Where a multi-criteria analysis is included in the integrated assessment, outline the relative weighting of the financial and non-financial components.
- Highlight any areas of significance that could not be quantified and integrate these into the analysis.
- In a summary table, provide an integrated assessment of financial and economic impacts to arrive at a ranking of project options.
- Conduct sensitivity and scenario analysis to test changes in the outcome if assumptions or other variables change.

Key principles of the analysis should include:

- as a minimum the assessment should include costs to be funded by the Government;
- financial impacts to be included need to be based on the final source of funding (e.g. if investors will initially bear the cost, but this will be recovered in user charges (as under some PPP models), then this should be included;
- if funding sources for project options are not yet identified, then the assessment should include all financial impacts (costs); and
- irrespective of the approach used for the integrated analysis, risk assessment should be incorporated into the integrated assessment to ascertain whether the risk assessment outcomes change the preferred project option.

If there is uncertainty over this aspect then two assessments might be done (e.g. where relevant, an integrated assessment may be undertaken with and without Commonwealth funded costs).

## Approach to the integrated assessment

Where a cost benefit analysis has been undertaken:

- a multi-criteria analysis (MCA) may be used separately to the CBA to assess non-monetised impacts if they are significant; or
- if an MCA is not used to integrate some (or all) of the results, non-monetised impacts may be described separately from the economic evaluation's headline (CBA) results.

Where a cost benefit analysis has not been undertaken:

- impacts should be monetised wherever possible, and a CBA conducted; or
- where this is not possible, an MCA may be the most appropriate option for the integrated analysis **where the investment has a high level of non-monetised impacts or the investment is small in value**. The MCA attempts to compare quantitative and qualitative impacts across proposals by assigning weights and scores to criteria linked to the objectives of the proposal.

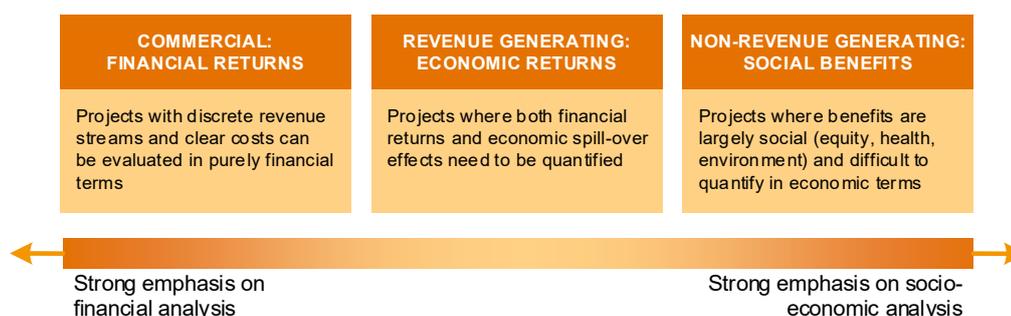
## Multi-criteria analysis

MCA can be used for smaller projects where the low cost of the investment doesn't warrant a CBA, or for proposals where significant economic benefits cannot be monetised. In carrying out MCA, objectivity is a key concern.

Key principles to underpin the use of MCA are:

- balanced weighting of financial impacts (costs) and economic, social and environmental impacts (for example these might be weighted at 50 per cent each), which should sum to 100 per cent;
- consider the relevant importance that the expected economic, social and environmental impacts of project options have to the Government depending on the investment type, as described in Figure 7;
- impact criteria should align with the investment benefits identified in the full business case. Criteria should also align with negative economic, social and environmental impacts if these are material (e.g. environmental costs from an initiative); and
- impacts included in the assessment should be independent or, if they are not independent, they should be included in way that avoids double counting (note that overlapping impacts are sometimes included to better illustrate the breadth of benefits from a project option).

**Figure 7: Considering the importance attached to financial analysis and economic impact assessment**



## Sensitivity analysis

Sensitivity analysis is a form of quantitative analysis that tests the validity of assumptions under various conditions. It is useful for uncertain investments, but may not be required for routine low-risk projects. Sensitivity analysis examines how NPVs, benefits, costs or other outcomes vary as individual assumptions or variables are changed, such as testing the likelihood of an uncertain impact occurring by changing probabilities or testing the discount rate. Refer to the **Economic Evaluation** technical guide for more information on the discount rate.

Sensitivity analysis can address two key questions:

- Would the preferred project option still be worthwhile pursuing if some of the key assumptions are incorrect?
- What actions can be taken to reduce the risks before accepting a particular project option?

It is also possible to determine switching values. That is, how much would a given significant driver (for example an exchange rate or revenue forecast) have to change before an alternative project option displaces the preferred project option or before it becomes negative NPV?

## Scenario analysis

A scenario analysis evaluates the changes to outcomes as a result of changes to multiple variables under different likely scenarios. The changes to the variables in a scenario analysis should be realistic and be generally based on optimistic and pessimistic scenarios that have a reasonable likelihood of occurring, rather than extreme cases.

Uncertainty in estimates of impacts can be taken into account in cost benefit analysis by the use of tools and techniques such as sensitivity and scenario analysis. However, uncertainty may be associated with the underlying investment concept or the circumstances surrounding it. This may require an adjunct to the analysis approach to incorporate options, which allow the flexibility to defer some of the decision-making until that uncertainty is resolved, including through the use of real options.

## Presenting the integrated analysis

This guideline recommends using tables to present a summary of the integrated analysis (e.g. Table 8 and Table 9).

**Table 8: Presenting the results of the options analysis**

Strategic response:	[Name]				
	Project option 1: Do Nothing	Project option 2:	Project option 3:	Project option 4:	Project option 5:
<b>Investment benefits</b>					
% of full benefits to be delivered Benefit 1... Benefit 2... Dis-benefits Negative impacts that are likely to occur as a direct consequence of implementing this option.					
<b>Integrated analysis</b>					
Key assumptions Analysis period (years) Capital costs (\$m) Output costs (\$m)					
<b>Cost benefit analysis of monetary costs and benefits discounted at the appropriate discount rate</b>					
Present value of benefits (\$m) Present value of costs (\$m) Benefit cost ratio Net present value (\$m)					
<b>Other important considerations (see the examples provided)</b>					
Intangible costs/benefits (e.g. small, med., large) Distributional impacts (e.g. small, med., large) ...					
<b>Risks</b>					
Primary risks that the expected benefits will fail to be delivered (criticality/likelihood) H/M/L					
<b>Time</b>					
From funding date to delivery of benefits (range) From funding date to operation (range) From funding date to delivery of benefits (range)					
<b>Preferred option</b>					
<b>Overall assessment</b>					
<b>Recommendation</b>					

**Table 9: Presenting the results of the options analysis, with multi-criteria analysis**

Strategic response:	[Name]				
	Project option 1: Do Nothing	Project option 2:	Project option 3:	Project option 4:	Project option 5:
<b>Investment benefits</b>					
% of full benefits to be delivered					
Benefit 1...					
Benefit 2...					
Dis-benefits Negative impacts that are likely to occur as a direct consequence of implementing this option.					
<b>Integrated analysis</b>					
Key assumptions					
Analysis period (years)					
Capital costs (\$m)					
Output costs (\$m)					
<b>Cost benefit analysis (of monetary costs and benefits discounted at the appropriate discount rate)</b>					
Present value of benefits (\$m)					
Present value of costs (\$m)					
Benefit cost ratio					
Net present value (\$m)					
<b>Multi-criteria analysis (ranking of intangible costs and benefits, if any)</b>					
Criteria 1					
Criteria 2					
Criteria 3					
<b>Risks</b>					
Primary risks that the expected benefits will fail to be delivered (criticality/likelihood) H/M/L					
<b>Time</b>					
From funding date to operation (range)					
From funding date to delivery of benefits (range)					
<b>Preferred option</b>					
<b>Overall assessment</b>					
<b>Recommendation</b>					

## Integrated analysis (fictional transport example)

Note that for simplicity these examples include only two project options (other than the base case).

### Financial impacts

All costs to be borne by the Victorian Government.

Project option	Financial impact
Project option 1	Estimated net present cost of \$820 million over 30 years (inclusive of upfront capital costs, ongoing maintenance costs and road residual values after 30 years).
Project option 2	Estimated net present cost of \$920 million over 30 years (inclusive of upfront capital costs, ongoing maintenance costs and road residual values after 30 years).

### Socioeconomic impacts

Socioeconomic impacts include travel time savings, vehicle operating cost savings, accident cost savings, plus savings in other externalities (air pollution, greenhouse gas emissions, noise, water pollution and others). They also include various benefits from the removal of trucks from the Smithville city centre (noise, amenity, public safety, etc.). All of these benefits (relative to the base case) may be monetised (see table) using transport evaluation guidelines.

Project option	Monetised socioeconomic impacts
Project option 1	<p>\$800 million of monetised socioeconomic benefits comprising:</p> <ul style="list-style-type: none"> <li>estimated \$630 million benefits from reduced travel times, vehicle operating costs, accident costs and externalities; and</li> <li>estimated \$170 million benefits from 70 per cent reduction in the number of truck movements through the Smithville city centre.</li> </ul>
Project option 2	<p>\$935 million of monetised socioeconomic benefits comprising:</p> <ul style="list-style-type: none"> <li>estimated \$810 million of benefits from reduced travel times, vehicle operating costs, accident costs and externalities; and</li> <li>estimated \$185 million of benefits from 80 per cent reduction in the number of truck movements through the Smithville city centre.</li> </ul>

### Integrated analysis

Integrated analysis is a CBA because the majority of costs and benefits are monetised.

Impact	Project option 1	Project option 2
Financial impacts (costs)	(\$820 million)	(\$920 million)
Monetised non-financial impacts (benefit)	\$800 million	\$935 million
<b>NPV</b>	<b>(\$20 million)</b>	<b>\$15 million</b>

**Project option 2** is recommended (there are no major risks that need to be taken into account).

### Sensitivity analysis

This section conducts sensitivity analysis on the socioeconomic and environmental impact assessment of project options, with a focus on the net present values (NPV).

A key driver of the calculation of NPVs is the outputs of the transport demand modelling. That modelling underpins the calculation of project option benefits. The values shown earlier reflect best estimates. However, there is a range of uncertainties in transport demand modelling (e.g. land use assumptions, model calibration, value of time and user sensitivities to financial costs) that may lead actual benefits to vary from the estimated values.

To evaluate the potential impact of this uncertainty, this section assesses the sensitivity of the *net present values* to changes in the *monetised benefits*. For simplicity, the scenario analysis captures uncertainty in demand modelling by including general changes in monetised benefits (10 per cent, +10 per cent) that critically depend on that modelling, rather than separately modelling changes to individual demand parameters. As part of this analysis, it is assumed that the benefit item of residual asset value is not impacted by these scenarios.

The tables at Appendix X show how the NPVs for the project options change under these scenarios. The key findings of the sensitivity analysis are that the NPVs are indeed sensitive to the transport demand modelling. For example, when the monetised benefits are increased by 10 per cent, all project options have a net present benefit. Importantly, option 2 retains a positive NPV even when the monetised benefits are reduced by 10 per cent.

This validates the earlier finding that option 2 is the recommended approach. It retains a net present benefit under a pessimistic scenario for demand. This is before the non-monetised benefits are included in the assessment.

### Integrated analysis – CBA combined with MCA (fictional bushfire safety example)

Note that for simplicity these examples include only two project options (other than the base case).

The following costs need to be included in the analysis:

- investment in electricity distribution network assets in rural areas to reduce risk of these starting bushfires in future;
- financial impacts; and
- investment costs will be paid by the Victorian Government and by electricity distributors in rural areas (to be recovered from users in those areas through network charges).

Project option	Monetised socioeconomic impacts
Project option 1	Estimated cost of \$600 million (NPV) <ul style="list-style-type: none"><li>• \$215 million paid by the Victorian Government</li><li>• \$385 million initially funded by electricity distributors and recovered from electricity users</li></ul>
Project option 2	Estimated cost of \$1.18 billion (NPV) <ul style="list-style-type: none"><li>• \$795 million paid by the Victorian Government</li><li>• \$385 million initially funded by electricity distributors and recovered from electricity users</li></ul>

### Socioeconomic impacts

The project options reduce the risk that power lines start bushfires. The non-financial impacts (benefits) include the avoidance of future bushfires and associated costs to the community/environment.

These impacts include a mix of social, economic and environmental impacts.

Estimated social and economic impacts of the project options have been monetised – based on a literature review of the cost of major bushfires, the expected reductions in power line bushfire risks from the project options and other assumptions (e.g. the frequency of major bushfires in future).

Environmental impacts of the project options have not been monetised – because there is limited research to draw upon on the impacts of major bushfires on the environment (greenhouse gas emissions, water yields, water quality, soil quality, native species, etc.) and the appropriate monetary value to assign to these.

Non-financial impacts have been calculated as shown.

Project option	Monetised socioeconomic impacts
Project option 1	\$1.12 billion estimated reduction in future bushfire costs (social and economic) from reducing the environmental costs of bushfires in future (greenhouse gas emissions, water yields, water quality, native species, etc.).
Project option 2	\$1.25 billion estimated reduction in future bushfire costs (social and economic) from reducing the environmental costs of bushfires in future (greenhouse gas emissions, water yields, water quality, native species, etc.).

MCA is used in addition to a CBA because not all major non-financial impacts can be monetised.

### Scoring of monetised impacts

NPV of monetised impacts is scored according to the scale shown. The highest monetary impact in the assessment is \$1.25 billion, so the scale is set to ensure this impact scores close to 4. Note that anything equivalent to the base case is scored at 0.

Impact range (NPV, \$'000 000)	Conclusion	Score
\$975 to \$1 300	'Very much better than the base case'	+3 to +4
\$650 to \$975	'Much better than the base case'	+2 to +3
\$325 to \$650	'Moderately better than the base case'	+1 to +2
\$0 to \$325	'Little better than the base case'	0 to +1
\$0 to (\$325)	'Little worse than the base case'	0 to -1
(\$325) to (\$650)	'Moderately worse than the base case'	-1 to -2
(\$650) to (\$975)	'Much worse than the base case'	-2 to -3
(\$975) to (\$1 300)	'Very much worse than the base case'	-3 to -4

This leads to scoring for monetised impacts as shown:

	Monetised impacts	Score
Project option 1	Estimated cost of \$600 million (NPV)	(1.85)
	Estimated social and economic benefits of \$1.12 billion (NPV)	3.45
Project option 2	Estimated cost of \$1.18 billion (NPV)	(3.63)
	Estimated social and economic benefits of \$1.25 billion (NPV)	3.85

### Scoring of non-monetised impacts

Environmental impacts are scored based on the expected reduction in power line bushfire risks under the project options against the following scale (note that thing equivalent to the base case is scored at 0.)

Reduction in power line bushfire risks	Conclusion	Score
75% to 100%	'Very much better than the base case'	+3 to +4
50% to 75%	'Much better than the base case'	+2 to +3
25% to 50%	'Moderately better than the base case'	+1 to +2
0% to 25%	'Little better than the base case'	0 to +1
(\$975) to (\$1 300)	'Very much worse than the base case'	-3 to -4

This leads to scoring for non-monetised impacts as shown:

	Non-monetised impact	Score
Project option 1	Reduction in the environmental costs of bushfires in future (estimated 55 per cent reduction in power line bushfire risks)	2.20
Project option 2	Reduction in the environmental costs of bushfires in future (estimated 62 per cent reduction in power line bushfire risks)	2.48

### Weighting of financial, socioeconomic and other impacts

Each impact (benefit) should be weighted according to their relative value to the Victorian community. The monetised socioeconomic impacts (social and economic benefits – e.g. human lives, damage to assets) are expected to have much greater value to the Victorian community than non-monetised impacts (environmental benefits). Based on this consideration, the impacts are weighted as follows:

- Financial – 50 per cent
- Monetised non-financial impacts (reduced social and economic costs of bushfires) – 40 per cent
- Qualitative non-financial impacts (reduced environmental costs of bushfires) – 10 per cent

Impact	Project option 1	Project option 2
Financial impacts (costs) – 50 per cent	(0.92)	(1.82)
Social and economic impacts (benefits) – 40 per cent	1.38	1.54
Environmental impacts (benefits) – 10 per cent	0.22	0.25
<b>Net score</b>	<b>0.68</b>	<b>(0.03)</b>

Project option 1 is recommended as it achieves the highest score in the MCA. (It also has the highest NPV.)

Sensitivity analysis of the option might be conducted by varying any number of relevant parameters, such as:

- the estimated cost of a major bushfire in future (affects estimated value of social and economic impacts);
- the degree of bushfire risk reduction achieved by the project options (affects estimated value of all non-financial impacts); and
- discount rates used in the calculation of net present values (for both financial and non-financial impacts).

### 2.6.13 Detailed economic evaluation of the project solution

The economic evaluation undertaken to compare project options can now be formally tested using the more detailed valuation of costs and benefits developed for the project solution.

The measures of costs and benefits need to be compared with a no policy change base case over a relevant period of time to capture whole of life impacts. This analysis is used to determine whether the investment makes a positive contribution to society's welfare. The amount of this contribution will also be used by Government as part of the information to help support decisions about which investments should be supported, for example, whether to invest in transport initiatives or schools (or which investment to support from a range of options within a particular portfolio). This will include which investment has the potential for the greater impact on society's welfare and what is the likely distribution of that impact.

If the cost benefit analysis based on detailed costing and valuation of benefits is inconsistent with the project options analysis of concept estimates and no longer presents a value for money investment, the project options may need to be revisited to find a more viable option or the investment may need to be abandoned.

The **Economic Evaluation** technical guide provides useful guidance on valuation techniques and assessment methodologies. For asset projects, refer to the **Project Budget** technical guide, which provides specific guidance on development of the project budget. Further guidance on this is also provided in Step 9. The tables below are based on that guidance and may be modified to incorporate appropriate details.

## 3. What is a delivery case?

The delivery case focuses on demonstrating whether the investment can be delivered.

The preliminary business case contains high-level information on the project's deliverability such as order of magnitude costs.

The full business case contains the substantial evidence base required to establish the case to invest and to provide the confidence that it can be delivered as planned. Its content is accumulated over the entire period of shaping a new investment proposal.

The checklist below is for business case developers and assessors. Its purpose is to guide the thinking in the business case as the delivery proposal is developed and to assess proposals once complete.

**Table 10: The 16 questions for the delivery case**

Value for money	Commercial and financial	Management	Delivery
1. Have the project options been specified clearly, including key risks, assumptions, constraints and dependencies?	5. Is the solution specified clearly and fully (all business changes and assets)?	9. Is the governance structure identified and is it appropriate for this investment?	13. Has an appropriate change management strategy been provided to support benefit delivery?
2. Consistent with the preferred response option, has a reasonable spread of project options been analysed?	6. Have all significant risks been identified along with strategies for their management?	10. Is there evidence that the implementing organisation has the capability and capacity to mobilise and deliver this investment?	14. Are the proposed timelines and investment milestones reasonable?
3. Is the recommended project solution the best value for money way to respond to the problem and deliver the expected benefits?	7. Has the project solution been appropriately costed (including risk adjustment)?	11. Have relevant stakeholders been identified along with strategies to manage their engagement?	15. Has an appropriate benefits management strategy been outlined?
4. Is the procurement strategy the most appropriate for this investment and attractive to the market?	8. Have alternative sources of funding been considered?	12. Has a robust project management strategy been outlined?	16. Has the transition from construction to operation been adequately considered?

### 3.1 How long-term planning relates to this stage

During the delivery case stage, agencies are asked to confirm that an identified need for an investment aligns with the agency’s long-term service planning to meet future service demands as well as its asset management objectives. The investment proposal should be part of a cohesive strategic response to a service delivery challenge. Asset initiatives should be included in the asset management strategy for the department’s entire asset base. It should identify and coordinate implementation with dependencies of other investment initiatives.

For more information about asset planning, refer to the Asset Management Accountability Framework available at <https://www.dtf.vic.gov.au/infrastructure-investment/asset-management-accountability-framework>

## 3.2 Supporting material for the delivery case

The underlying framework of the delivery case will be submitted together with the following documents:

- procurement strategy;
- risk register (note this is a live document and should be refreshed at regular intervals);
- detailed project schedule;
- detailed costings (an independent cost review may be required for some HVHR projects); and
- red-rated Gateway recommendations in the recommendation action plan.

### 3.2.1 Carrying out research in the delivery case stage

Central to initiating a new investment is carrying out research, which may have been partially addressed in agency planning processes and in the investment case stage. This research will provide an evidence base for this delivery case. This includes analysing the:

- current market environment (e.g. cause of the market failure, employment levels);
- impacts on stakeholders;
- current and projected trends and published forecasts and modelling;
- technological developments;
- market sounding;
- appropriate governance and procurement options available; and
- research of similar projects including those from interstate or overseas, to obtain lessons learned.

### 3.2.2 Choosing stakeholders to help build the delivery case

Agencies should consider which stakeholders are best placed to assist them in developing the business case. The role of stakeholders here should relate to the amount of influence and importance that they may have in shaping and driving the success of the proposal. They should represent a range of portfolios to contribute a broad range of perspectives to the proposal. In particular, **for HVHR projects, central agencies should be engaged early to provide a whole of government view**. In some cases, it may be appropriate to involve industry stakeholders. Without the right stakeholders involved in the business case development process, the full business case may not provide clarity on the appropriateness of all key elements of the business case.

**Care needs to be taken, in particular with external stakeholders, not to indicate any aspect of government commitment, until Government has made a clear decision on proposals.**

The **Project Governance** technical guide provides further information on engaging stakeholders.

### 3.2.3 Prove the deliverability

A sound investment business case needs to lay out much more than just what a proposal intends to do. It needs to consider how it will deliver on its intent – and, indeed, how it will deliver through the life of the investment. In this section, agencies are asked to provide detailed information on the recommended project option/project solution selected at the end of the project options analysis section. The full business case is the first time agencies are asked to address the information required in Step 5 of the full business case and speaks to the question: *'Can the solution really be delivered?'*

To avoid duplication, provide references to earlier sections where appropriate and reconfirm specific assessments such as the risk assessment, the BCR and NPV calculation, in the light of detailed costing and higher level of accuracy required in presenting the project solution.

**The rationale for proposing the project solution must be clear and defensible.**

**Ultimately, stakeholders and decision-makers should have assurance that the analysis and the selection process are robust.**

## 3.3 Step 5: The project solution

This section asks agencies to present the project solution in detail. If a real options analysis has been undertaken, the project solution is the preferred real option. Depending on the nature of the investment, it may be useful to involve the market in scope development and constructability analysis to improve the understanding of the project solution's costs and risks, and to inform the procurement options analysis process. It may be also be appropriate to involve potential contractors in scope development and constructability assessment.

The information presented here should clearly present the evidence relied on in the options analysis in arriving at the recommendation, including:

- whether a real options approach applies to the project solution (i.e. if the option builds in flexibility to change direction in the face of uncertainty);
- a design intent statement that outlines the intended level of design quality and identifies what design aspects of the project need special consideration (the Office of the Victorian Government Architect can assist with this if required);
- all major assumptions, including the scope of the analysis;
- why certain costs and benefits have been included or excluded; and
- the valuation methodologies employed to estimate costs and benefits.

### **Statement of design intent (fictional transport example)**

Agencies are encouraged to submit a design intent statement that outlines the intended level of design quality and identifies what design aspects of the project need special consideration (the Office of the Victorian Government Architect can assist with this if required).

#### **Statement of design intent**

The design intent for this proposed investment is to reinvigorate the historic Harrison Central Station, improve its transport function and unlock the urban design and development potential of the precinct. The station is one of Australia's most important heritage sites and one of the nation's busiest train stations. These factors create a complex mix of demands and priorities on the site and its wider precinct. The design response is required to balance boldness of vision with a careful attention to the many opportunities and challenges of the station. A rejuvenated Harrison Central Station and precinct will act as an urban catalyst, playing a critical strategic role in enhancing essential transport services and integrating an appropriate mix of uses for a growing city. It will also play a vital role in strengthening connections between the city and the station, and beyond to the Yarra River and its expanding arts and sports precincts to the south and south east.

The design intends to set an international benchmark in heritage conservation, adaptive reuse, sustainable urbanism and high-quality architecture and urban design, adding to a legacy of award-winning public buildings and spaces in Melbourne. This legacy includes recent projects such as the Harrison Museum (opposite the World Heritage-listed 19th century Royal Town Hall), Harrison City Square, the Harrison City Sports Centre and the Melba Convention Centre. These architectural exemplars contribute to Harrison's international reputation for innovative design and investment in a cultural capital, which in turn frames the expectation for the Harrison Central Station design.

The overarching objectives of the design are to:

- upgrade the station to its former glory, in the tradition of other great cities around the world, as a State and international icon and a focus of the Harrison central business district (CBD);
- restore and protect the Administration Building and other heritage elements to include adaptive reuse of areas that have high public interest, such as the ballroom, to be accessible to the public;
- improve all aspects of the transport function of the station and adjacent transport modes and cater for significant growth in transport patronage;
- better integrate the station with its surrounding precincts, such as Harrison City Square, providing better linkages between the CBD and the Eyre River;
- better utilise the land adjacent to rail and air space above rail on the western portion of the site;
- provide significant civic space while allowing for a distinctive and memorable architectural outcome with a mix of uses; and
- provide a value for money solution capable of being (at least partially) self-funding.

### **3.3.1 Public interest test**

In this section, agencies are asked to apply the public interest test to all investments that are the subject of a full business case. This test should be applied to the extent that is appropriate to the size and scale of the investment. The full business case should provide a summary of the test.

**The public interest test should be applied to all significant investments at the pre-tender phase.**

The public interest test involves determining whether suitable measures can be established to adequately protect the public interest. In the business case, detail the impact of the project on the eight elements of public interest: effectiveness; accountability and transparency; affected individuals and community; equity; consumer rights; public access; security; and privacy. Annexure 7 of the *Partnerships Victoria* requirements further explain public interest issues and how to undertake a public interest test.

#### **Business case information requirements for the project solution**

- Clearly state which project option is the project solution, and clearly summarise the rationale for its selection in light of the project options analysis. Note that the project solution may be a program that consists of a number of projects.
- Provide details of the project solution, including its project objectives, assumptions, scope and locational details.
- Provide a statement of investment benefits to show how well the project solution addresses the problem, and key benefits including the specific KPIs and benchmarks.
- Describe any interdependencies and/or interfaces.
- If a major asset is required, provide designs and specifications to the extent they have been developed. (Detailed designs are not expected at this stage; however, agencies must provide enough information on scope to enable a rigorous costing).
- Provide information on preferred sequencing or staging of the project solution and justify why staging/sequencing is required.
- Identify options to scale the project, including possible impacts on the project benefits.
- Describe significant broader impacts specific to the implementation of the project solution (references can be made to other sections of the business case if necessary, to avoid overlap), e.g. on the sector, economy more generally, and/or other key stakeholders.
- Agencies should include a design feasibility study that demonstrates the long-term vision for the preferred proposal in the broader urban/environmental context. Provide a 'design intent statement' to demonstrate the intended level of design quality and identify what design aspects of the project need special consideration.
- Provide an overview of public interest issues across the eight elements of the public interest test: effectiveness; accountability and transparency; affected individuals and community; equity; consumer rights; public access; security; and privacy.
- Identify the VCC requirements that need to be met, any activities undertaken to date, and any further activities to be undertaken.

### **3.3.2 Lessons learnt/project insights**

Projects often face similar challenges, and embedding lessons learnt into the development of new projects can improve their delivery outcome.

The business case should summarise internal analysis of projects of a similar nature, projects that employ similar features, or projects that share similar risks. An internal analysis can also identify projects that have established best practice processes such as a new governance model or a new approach to systems integration.

#### **Business case information requirements for lessons learnt**

- Summarise internal analysis of past projects that are similar in nature, have employed similar features or share similar risks.
- Summarise best practice processes established through other projects that can be applied to the project.
- State how each is relevant to the project, and how the lesson has been applied.
- Summarise lessons learnt and other project insights from similar projects. For unique investments, this can include projects in different portfolios or projects that have adopted similar technical approaches, or projects that have some similar characteristics.

### 3.3.3 Project Development and Due Diligence

The successful execution and performance of a project depends heavily on the quality of its Project Development and Due Diligence (PDDD).

PDDD is the basic, initial engineering and design undertaken for a project, usually following a conceptual exploration or a feasibility study. PDDD defines the specific technical requirements for a project, identifies key issues including technical, contextual and environmental matters and resolves them where possible, and enables the cost of the investment to be estimated.

PDDD incorporates due diligence planning and development activities including site investigation and documentation, analysis and research, production of design and development proposals, and reports of sufficient quality, breadth and depth to clearly define project scope, risks and critical requirements. These activities facilitate the project's detailed design and support the successful procurement, delivery and operation of the project. PDDD also enables the preparation of project cost estimates to an acceptably accurate level throughout the design development stages.

Agencies should integrate PDDD elements into projects and consider the information in the PDDD Guidelines.

#### **Business case information requirements for PDDD**

- Outline the PDDD elements identified and considered relevant for this project, at this stage, as recommended in the PDDD Guidelines and:
  - sufficient evidence or documentation of how appropriate due diligence for each element has been met; and
  - why due diligence was not conducted for any relevant PDDD elements.
- Outline any PDDD elements identified and considered **not** relevant for this project, at this stage, as recommended in the PDDD Guidelines, with reasons for being considered not relevant and supporting evidence or documentation as required.
- Provide other relevant evidence that project proponents have integrated PDDD elements into the development of this project.
- Utilise the PDDD checklist in the PDDD Guidelines and reflect the checklist as a table identifying elements, a short description and references to evidence.

## 3.4 Step 6: Commercial and procurement

### 3.4.1 Procurement strategy

Having a sound procurement methodology is essential to ensuring project delivery. As the decision to fund a project includes a decision on the procurement methodology, the full business case must include an analysis of procurement options and a recommendation on the preferred procurement method. The full business case must demonstrate that the investment would be procured by the most appropriate method and provide an overview of the recommended procurement strategy.

Good procurement outcomes for any project mean developing a strategy that will:

- maximise the likelihood of achieving project objectives;
- maximise value for money;
- minimise the likelihood of problems occurring later (this may be by selecting a flexible real options approach);
- improve management of risk and its consequences; and
- enable *quality* to be achieved (including design quality).

If a real options approach has been used in the formulation of the project solution, it will be necessary to select a procurement option that enables the project team to respond to changes in direction in accordance with predetermined criteria.

### **Procurement options analysis**

Choosing the right procurement model for an investment is a significant decision requiring in-depth analysis and consideration – getting it wrong could have a serious impact on the project delivery success and realisation of benefits.

The procurement methodology employed by the strategy must be appropriate for the types of risks, issues and ambitions that have been identified as associated with the specific project. These decisions must be based on a thorough analysis of relevant facts, particularly procurement objectives, project characteristics, risks, the requirements, supplier markets, and agency capability.

A good procurement options analysis process includes:

- compiling information on project objectives (linked to investment benefits), project characteristics, risks, etc.;
- developing assessment criteria to shortlist, then analysing procurement options;
- a shortlisting process (this is not always needed);
- a detailed procurement options analysis to identify the best approach;
- tailoring of the preferred approach; and
- considering a range of other issues to consider such as probity, transparency, value for money, fairness, etc.

Agencies are encouraged to use a procurement workshop to enable key stakeholders to discuss and reach consensus on the best procurement model for the investment being considered.

DTF recommends the use of the process set out in the **Procurement Strategy** technical guide when developing this section of the full business case.

The Victorian Government's public construction projects use a variety of delivery models. These include:

- public private partnerships (Partnerships Victoria projects);
- alliance contracting;
- managing contractor;
- construct only (lump sum or fixed price contract);
- design and construct;
- design, construct and maintain;
- construction management; and
- hybrid approaches.

Delivery models can be combined to create a hybrid delivery model more suited to the project circumstances. On a large project, parts of the project may be packaged separately and so there may be different contracts and delivery models, which all need to be reflected in the procurement strategy.

Agencies may need to form adaptations to the preferred procurement method to ensure quality and good design are embedded in the process and are key criteria for measuring success.

The Office of the Victorian Government Architect can provide advice and recommendations on the selecting procurement models and potential adaptations from a design perspective.

### **Market engagement**

Market engagement refers to two distinct activities important in developing procurement strategies:

1. **Market soundings** – involves accessing information and intelligence (via a range of activities including industry forums and market surveys) on the potential capacity of industry to deliver the project. This process enables a competitive bid process.
2. **Industry briefings** – involves collecting project-specific information during the planning phase to facilitate preliminary dialogue with industry. This helps ensure a competitive market prior to inviting tenders. There is a range of issues that may be discussed at this point based on project specifics (subject to probity). Some include:
  - scope of the project;
  - project timelines;
  - project specific issues and requirements; and
  - market interest and capability.

### **Business case information requirements for the procurement options analysis**

- Provide an analysis of key skills and resources required, and possible limitations or issues that may impact the proposed solution, including options to mitigate these issues.
- Outline procurement options testing and analysis method and process, showing ranking of options against criteria used to select recommended procurement strategy, with a balanced view of the related issues of time, cost, whole of life value, and quality.
- Outline the recommended procurement strategy, justifying why it is the best value for money option (e.g. by having the capacity to include flexibility or better manage risk), demonstrating how it builds on the business case and links to implementation and delivery.
- In the procurement strategy:
  - outline the methodology, approach, process and project management structure for implementation of the investment's procurement;
  - formulate adaptations to the preferred procurement method to ensure that quality and good design are embedded in the process and are key criteria for measuring success of the project;
  - outline the organisation's experience and capability to deliver the preferred procurement method as well as outline key risks and contractual issues. Provide details of legislative, policy or business practice changes required (referring to ILM);
  - provide an overview of the planning for the approach to market, evaluation of offers and identification of the preferred supplier;
  - ensure the best supplier is selected for the right reasons and at a price that represents value for money over the life of the contract;
  - assign roles and responsibilities; and
  - set realistic timeframes.
- Outline market conditions and any potential constraints to delivery.
- If a PPP procurement or alliancing approach is being proposed additional details are required (DTF can advise on these requirements).
- Outline intended contractual arrangements.
- Outline potential payment mechanisms.
- Summarise any risks related to commercial and procurement.
- Undertake commercial-related risk assessment and management strategies.
- Outline intended allocation of risks between Government and contractor(s).

### **Procurement analysis and strategy (fictional hospital example)**

This case study provides an example summary of the procurement options analysis and the basis for recommending a procurement option for a new hospital facility. The facility is a new cancer centre at Bird Health, which would house radiation oncology, ambulatory oncology and palliative care. The cancer centre would replace an existing building and must be closely integrated with adjacent facilities. The total estimated capital cost of the recommended option for the centre is \$100 million. The project and construction program for the preferred option runs for two and a half years (with two years of construction). A decision not to stage the project was made prior to commencing the procurement work. The key development risk is designing an addition that integrates well with existing facilities.

Analysis of procurement strategy for this project was conducted over two stages: an assessment of the merit of bundling (to shortlist models), and then a detailed evaluation phase.

The merit of bundling was considered, at a high level, in the context of key project characteristics and issues, including the value of the project and degree of efficient risk transfer that may be achievable. The bundle tested was asset development and facilities maintenance (FM). (Clinical services could not be included.) Overall, bundling was considered unlikely to provide a net efficiency: the FM task is conventional with a low level of risk, which suggests limited gains from transfer or innovation. As a result, the analysis focused on unbundled models.

A procurement workshop (involving the project team and quantity surveyor) was used to agree procurement objectives and evaluate potential models. The procurement objectives were:

- time to market: ensuring the project is completed to meet articulated service requirements;
- value for money: ensuring risk transfer is optimal (including price certainty) and creating scope for innovation; and
- agency capability/process risk: ensuring risks from capability and experience with process are acceptable.

The three models selected for evaluation were the construct only model, the construction management model, and the managing contractor model. These models were shortlisted because they are typical unbundled models generally used for projects of this size and type, and for which the agency has some experience. Other unbundled models such as an alliance were set aside as they clearly do not suit the project characteristics.

The Procurement Strategy (Appendix X) summarises the shortlisting process and contains a detailed evaluation of these three models against the selection criteria. Key results are summarised below.

	Construct only	Construction management	Managing contractor
Time to market	This model potentially has the longest timelines, but there is not an urgent need to begin the project or a high risk of missing the scheduled in-dates. This leaves sufficient time for the State to complete a design and procure a builder.	There is not an urgent need to begin the project. If there was, this model could bring in construction advice at an early point.	Without a pressing need to begin the project, there is a weaker case for this approach from a schedule perspective, which does provide for early contractor involvement.
Value for money	Expected to provide the greatest scope for competition and certainty over contract prices. Administration costs are low. Project requirements (especially design and functionality) contain some unique features, which suggests limited value from trying to transfer design risks.	Construction component would also be competitively tendered, but this model imposes higher transaction set-up costs. The value of early construction involvement is considered low. While there are unique features of the services that complicate the design, the overall simplicity of the build suggests a weak case for this model.	This model typically defers the competitive tendering of the build components, which limits price certainty to a later point in the project schedule, meaning the State effectively retains price and time risks. The common trade-off – value from early involvement and a collaborative approach – is considered low in this case.
Agency capability/process risk	Bird Health has the most experience and capability using this model.	Bird Health has some experience in construction management.	Bird Health does not have any recent experience using this procurement model.
Conclusion	Recommended	Not recommended	Not recommended

Overall, the construct only model is preferred because it best suits the project characteristics. In particular it gives the State a high degree of flexibility during the design development process, which is considered necessary as the dynamic between physical integration of the new build and model of care is progressively tested and refined. This procurement model also offers price certainty at an early point and is familiar to the sponsor.

To validate the recommendation, Bird Health considered the market's appetite and capability. The successful use of the model for recent 'brownfield' projects of a similar size had demonstrated both appetite and capability.

The agency has skilled project managers and a capital development team with experience obtaining approvals, going through procurements for technical advisers, all stages of the design development process including engaging stakeholders and user groups, and managing the cost plan. The cost plan will be managed through an iterative process of refining costs as scope is finalised and design is developed to full documentation. The cost plan is the basis for testing the pricing from constructors.

This analysis and recommendation will be reviewed upon implementation, should this business case be successful.

The **Procurement Strategy** technical guide outlines options and key steps in developing an appropriate procurement strategy.

## 3.5 Step 7: Planning, environment, heritage and culture

In some cases, a planning permit will be required for project solutions. A planning permit is a legal document that allows a certain use or development on land. It normally contains a written document with conditions that must be met and a set of plans. Most applications for a planning permit will be made to the local council, but some are made to the Minister for Planning.

After a planning application has been lodged, the responsible authority will assess the application, which may involve notifying community stakeholders of the application.

An environmental impact analysis will be required for some asset proposals to meet relevant legislative requirements and identified community concerns. For some projects, an Environmental Effects Statement (EES) or a (Commonwealth) Environmental Impact Statement (EIS) may be required.

### **Business case information requirements for planning and environment assessments**

- Assess the likely planning, cultural and environmental approvals required and the likely requirements and impact this may have on the project solution.
- If completed, summarise the results of the EES or EIS and include with the full reports in an appendix.

### **Risk assessment and management in planning and environment**

Risks relating to planning and environment should be summarised in the business case. This could involve the outcome of community consultation and conditions or restrictions that may impact the project solution, and delays that may impact the project schedule.

### **Business case information requirements for planning and environment risk assessments**

- Summarise any key risks related to planning and environment.
- Undertake planning and environment risk assessment and management strategies.

## 3.6 Step 8: Project schedule

Decision-makers need to understand the extent of pre-construction activities and lead times, so it is important that agencies set out the timelines and details about project readiness.

Agencies should be able to provide a detailed project schedule and list all of the major milestones, including:

- the basis and assumptions used in setting timelines;
- advice of independent experts to establish practicality of timelines;
- comparison of timelines to similar projects, explanation for variance if it exists;
- major risks to achievement of timeframes (referring to other sections of the business case if necessary) (e.g. planning approvals);
- transition/change management timelines;
- critical dependencies; and
- the timing of uncertainties and real options trigger points and the timing of Government's response to them.

In a real options-based investment, it will be necessary to outline the timelines and milestones for those real options that are realistic alternatives to the preferred real option.

## A detailed project schedule is required for all HVHR projects.

### Business case information requirements for project schedules

- List the major milestones and deliverables and their delivery timelines and contingencies.
- Establish a process that ensures the quality of the project is maintained in the case of any unforeseen delay.
- Identify any critical paths and timelines that are fundamental for investment success.
- Outline the detailed project schedule, including procurement steps and statutory approvals and key decision points for project progression, termination or otherwise.
- Provide information on potential competing priorities, dependency analysis, skills, capabilities, availability of agency staff, etc.
- Summarise any key risks related to project schedule.
- Undertake schedule risk assessment and management strategies.
- Provide advice on public communication of project timelines (to be consistent with communications strategy).
- Confirm that all actions needed to progress the initiative have been adequately identified.

## 3.7 Step 9: Project budget

Up to this point costing data has been at a concept estimate level. Having identified the project solution, departments need to further develop the costing data to a preliminary design estimate level, which will form the basis for the budget funding consideration.

The business case requires agencies to develop robust cost and budget estimates that support sound investment decisions. Investments are undertaken to achieve service outcomes or other benefits over time. Often the capital cost is small relative to the ongoing cost of maintaining the service, therefore it is important to consider the ongoing operating costs and the sustainability of the investment upfront. As a result, the estimates need to address the following issues:

- financial planning of the investment, linking capital costs in the project budget to whole of life costs for service delivery;
- how to accommodate risk and uncertainty in project budgeting and delivery; and
- project governance and sign-off requirements surrounding project budgets.

The estimate for the project solution needs to be based on preliminary design work and a sound project scope statement. This information will be used to undertake a detailed economic evaluation of the investment.

The estimate needs to include the following:

- the project budget (capex) comprising a base cost estimate, a base risk allocation and a contingency amount. The base cost estimate has the greatest impact on the accuracy of the project budget as it is the largest component and the foundation on which the base risk and contingency are developed;
- the whole of life operational costs (opex) including service delivery costs, equipment costs and asset management costs. In some instances, the existing service delivery costs may reduce on a per service basis, but might increase as a result of a service volume increases. Agencies will need to consider how the investment will affect service delivery and the timing of that change; and
- appropriate cash flow details (distribution of costs over the life of the investment).

Important factors in developing a sound project budget include:

- a well-considered preliminary design to effectively deliver the benefits sought;
- clearly outlined cost assumptions;
- a good understanding of the market conditions; and
- availability of valid benchmarking data.

For unique, one-off projects, this is more difficult, requiring a greater focus on design and scope. A competent and experienced estimator will align the estimating process with a comprehensive industry best practice procedure. Refer to the **Project Budgets** technical guide for further information.

Practical examples of the ways in which the cost can be estimated or verified include:

- benchmarking against other facilities if other similar work has been undertaken before (domestically and internationally);
- reviewing functional specifications or early concept drawings by suitably qualified cost estimators such as quantity surveyors; and
- building up of costs by internal or external experts based on initial information (possibly using components such as industry accepted rates or reliable unit costs such as cost/km).

Project risks need to be identified and managed from the outset; consequently risk analysis and adjustment should focus on residual risks. Risk adjustment should not include allowance for poor planning (i.e. that is risks associated with flawed or truncated planning processes).

The contingency caters for volatility of the project risks, significant risks that fall outside the norm and sensitivity of the project to underlying risk assumptions.

Where the proposal will result in substantial changes to output costs (increase or decrease), the estimated impact (costs or savings) should be addressed.

This guideline recommends using tables to present a summary of the costing (e.g. Table 11 and Table 12).

**Table 11: Headline project cost element summary**

Element	Estimate	Table reference
Base cost estimate	\$XXXm	(Table 20)
Base risk allocation	\$XXm	(Table 21)
Project cost estimate	\$XXXm	
Contingency	\$XXm	(Table 21)
Project budget	\$XXXm	

Table 12: Base cost estimate

<b>BASE COST ESTIMATE</b> Effective date of BCE: dd/mm/yy Estimated date of commencement of construction: dd/mm/yy		
<b>1 Direct costs</b>		
1.1	Materials	
1.2	Labour	
1.3	Plant hire	
	<b>Subtotal</b>	<b>\$</b>
<b>2 Indirect costs</b>		
2.1	Recurrent overheads	
	2.1.1	Site facilities
	2.1.2	Plant and equipment – site maintenance
	2.1.3	Project management costs
	2.1.4	Commercial
	2.1.5	QA and safety
	2.1.6	Staff (VPS)
2.2	Non-recurrent overheads	
	2.2.1	Establishment and mobilisation
	2.2.2	Disestablishment and demobilisation
	2.2.3	Project insurances
	2.2.4	Professional fees – design, legal, financial, etc.
	<b>Subtotal</b>	<b>\$</b>
<b>3 Owner's cost</b>		
3.1	Contracted professional staff	
3.2	Investigations	
3.3	Land costs and resumptions	
3.4	Authority fees	
3.5	Owner-supplied plant and equipment	
	<b>Subtotal</b>	<b>\$</b>
<b>4 Contractor's fee</b>		
4.1	Profit margin	
4.2	Corporate overheads	
	<b>Subtotal</b>	
<b>5 Provisional sums</b>		
5.1		
	<b>Subtotal</b>	<b>\$</b>
<b>Total of base cost estimate</b>		<b>\$</b>

**Table 13: Project risks**

<b>Base risk allocation and contingency</b>		
<b>6</b>	<b>Base risk allocation</b>	
6.1	Escalation	(Period between BCE and construction)
6.2	Project Risk A	
6.3	Project Risk B, etc.	
	Subtotal	\$
<b>7</b>	<b>Contingency</b>	
	7.1	
	Subtotal	\$
<b>Total of project risks</b>		<b>\$</b>

### Detailed costing and economic evaluation (fictional health example)

Business cases must provide a detailed overview of the costing for the project solution. This case study illustrates how TEI, capital and output costs might be presented (for a fictional new hospital facility).

#### Detailed costing

##### Estimated capital cost

The quantity surveyor for the project has prepared a detailed capital cost estimate for the recommended option. Estimated capital costs are summarised below and the complete cost plan is at Appendix X. Base costs include construction works, various allowances, consultant fees and management costs. Capital cost estimates have been reviewed and are approved by the department's capital projects team. The NPV of capital costs (using a nominal discount rate of 8 per cent) is \$67.1 million.

##### Estimated capital cost of the preferred option (\$'000) from the cost plan

<b>Capital cost estimates</b>	<b>Preferred option</b>
Base cost estimate	\$49 330
• Construction works	\$7 065
• Allowances	\$6 025
• Consultant fees	\$1 150
• Management costs	\$63 570
• Total – base costs	
Base risk allocation	
• Cost escalation	\$5 518
• Other project risks	\$3 055
<b>Total – base risk allocation</b>	<b>\$8 573</b>
Project cost estimate	\$72 143
<b>Total – contingency</b>	<b>\$5 550</b>
<b>Project budget – gross TEI</b>	<b>\$77 693</b>

### Estimated operational costs

The recommended option will lead to an increase in operating costs as health services are expanded. The estimated annual increase is shown below for the first four years of operation (2012–13 to 2015–16). The net present value of estimated, operational costs for the project solution (incremental to the base case and calculated over a 25-year period) is \$229 million.

#### Estimated operational cost of the preferred option (2012–13 to 2014–15) (\$'000)

Operating cost estimates	2012–13	2013–14	2014–15	2015–16	4-year total
Operational expenditure	\$262 850	\$273 364	\$284 299	\$295 671	\$1 116 183
Less expenditures (base case)	\$260 000	\$269 100	\$278 519	\$288 267	\$1 095 885
<b>Incremental operational cost</b>	<b>\$2 850</b>	<b>\$4 264</b>	<b>\$5 780</b>	<b>\$7 404</b>	<b>\$20 298</b>

### Business case information requirements for the costing and economic evaluation of the project solution

- Provide a detailed overview of the costing for the project solution, including capital TEI and output costs. Include budget cash flow over a relevant period for both capital (supported by risk and contingencies) and output amounts.
- The project budget estimate including: base cost estimate, base risk allocation and contingency should be based on a project scope statement at the preliminary design estimate level.
- Identify the impact on output funding and the breakdown of operating costs to key components such as staffing, maintenance, depreciation, Capital Assets Charge (CAC), etc. This detail should extend over a reasonable period of years to allow a whole of life costing perspective.
- Departments should consult with DTF to agree costings for the project solution before submitting the business case for budget funding consideration.
- The net present value estimate should be recalculated based on the refined costs and a more developed assessment of the benefits for the project solution. For the project solution agencies may need to invest in valuation techniques such as market-based valuation, revealed preferences, stated preference or benefit transfer method to better assess the monetary value of benefits. Note: this should only be undertaken if the additional effort and expense incurred in assigning monetary values reflects the likely size of those impacts.
- Based on the detailed costing of capital, outputs and benefits for the project solution formalise the economic analysis (e.g. NPV and BCR) to demonstrate the economic impact of the investment.
- Outline all state delivery costs, including staffing impacts.
- Provide detailed summary of expected whole of life costs and maintenance costs.
- Undertake project budget risk assessment and management strategies.

### 3.7.1 Funding sources

In providing the estimate, agencies should outline any existing capabilities that can be used to complement/subsidise the investment value. Any likely Commonwealth support and/or private investment or in-kind contribution that may reduce the State's contribution should be outlined.

#### Funding sources (fictional health example)

Funding sources for the project must be clearly identified and explained. This case study provides an example of how this might be done for a fictional new hospital facility.

#### Detailed costing

##### Capital cost budget impact

The following table presents estimates on the gross TEI for the project and the net contribution required from the Victorian Government. The gross TEI of \$77.8 million would be partly funded by the Australian Government (\$20 million) and fundraising activities (\$15 million), so that the contribution required of the Victorian Government is \$42.7 million. The table also shows the time profile of estimated investment. Further detail on the external sources of funding is provided below.

##### Estimated capital cost budget impact of the recommended option (\$'000)

Capital cost budget impact	Total	2010–11	2011–12	2012–13
Project budget – gross TEI	\$77 700	\$17 483	\$48 563	\$11 655
Contribution from fundraising	(\$15 000)		(\$7 500)	(\$7 500)
Contribution from the Australian Government	(\$20 000)	(\$10 000)	(\$10 000)	
<b>Victorian Government – net contribution</b>	<b>\$42 700</b>	<b>\$7 483</b>	<b>\$31 063</b>	<b>\$4 155</b>

##### Output cost budget impact

In relation to the incremental operational costs of the recommended option, Bird Health will continue to source its recurrent clinical revenue from the State Government (through WIES, VACS and other acute and aged care funding models), grants funding, retail and car parking revenue and consulting suites. Department of Health has not yet agreed with Bird Health on the increases in funding associated with the increases in demand for clinical services. This will be resolved on an annual basis following negotiations between parties. Therefore, the specific budgetary impact of changes in operational costs from the recommended option is not estimated at this time.

#### Business case information requirements for funding sources of the project solution

- Discuss proposed funding sources for capital and output requirements and in addition to the option of new budget funding, discuss potential funding sources including contributions from other levels of government, private sector, sale of assets, etc.
- Identify any conditional impacts of particular sources.
- In providing the cost estimate, agencies should outline any existing capabilities that can be used to complement/subsidise/offset the investment value.
- Any likely Commonwealth support and/or private investment or in-kind contribution that may reduce the State's contribution should be outlined.

This guideline does not specify an estimating methodology as projects need to use the appropriate methodology for the particular investment type. It does advocate the need for appropriately skilled estimators as well as insightful and meaningful reviews by peers and the senior responsible owner to confirm it represents best in market and is defensible.

Refer to the **Project Budgets** technical guide for more information.

## 3.8 Step 10: Management

### 3.8.1 Governance

Project governance should set a firm framework that guides project success, creating transparency and confidence in decision-making, clarity of roles and responsibilities and consideration of stakeholder interests.

Agencies are required to establish effective governance of programs and projects in a transparent and robust way. Agencies must appoint a project sponsor or Senior Responsible Owner (SRO) to be accountable for ensuring their project is effectively delivered and the investment cost effectively realises its expected benefits. This means the SRO needs to have related service delivery responsibility and the skills to take on the responsibilities involved in oversight of the project. Agencies must ensure that the SRO appointed has an appropriate level of responsibility for overseeing the delivery of the project and transitioning the project into operation. **The SRO must reflect specific investment responsibilities and accountabilities in their performance agreement.**

Agencies must plan, govern, control and report on all projects through an appropriate and well understood governance and management regime. This means:

- defining and informing all relevant parties of the governance and management expectations;
- subject to scaling, creating a project decision-making body that is separate to stakeholder management and organisational governance. The size of the committee membership needs to be fit for purpose. In some instances, a project will be of such significance to the entity that it warrants the focus of the organisational governance board; and
- selecting the right people for the project steering committee (or project governance board) who are appropriately skilled and authorised. They must be capable of achieving timely and instructive governance to achieve the project's desired outcomes, but which mitigates the impact of project failure where necessary. For HVHR projects, DTF must be included in the project governance structure.

#### **Business case information requirements for the governance framework for the project solution**

- Outline the project governance regime proposed, including individuals either already involved or proposed to be involved in key positions such as the SRO and the steering committee, and demonstrate its appropriateness.
- Outline any existing governance frameworks (processes for controls and determination of authority and tolerance) that the project solution should align with.
- For HVHR projects, the roles of DTF and approvals by the Treasurer need to be factored in.

### **Governance (fictional energy example)**

A business case must detail the proposed governance arrangements for the investment and explain why these are considered appropriate. This case study illustrates the type of information required in a business case for a fictional project in the energy sector.

#### **Governance**

The Senior Responsible Owner (SRO) for the project solution would be Deputy Secretary, Energy and Earth Resources within the Department of Primary Industries (DPI). The proposed governance structure for the project solution includes:

- A Project Control Board (PCB) – the PCB will comprise senior members of agencies with key roles in implementing the project, plus a technical expert. The departments of Treasury and Finance (DTF) and Premier and Cabinet (DPC) would also be represented (given the HVHR status of the project), along with the project director and operations manager in DPI.
- Several advisory groups – a number of advisory groups (a working group, a technology reference group and an energy business reference group) will be established to provide specialist advice and inputs, and enable ongoing consultation between energy businesses and the Government. Most of these groups can be readily formed as they will include stakeholders that have already been consulted in the development of this proposal.
- A dedicated project team within the department – a new project team comprising four full-time equivalent staff will be formed to deliver the project.

This structure is illustrated in Figure X, while the proposed composition and role of each of these bodies is discussed below. Overall, the proposed governance structure is considered appropriate because:

- the success of the project will rely on close coordination across DPI and between DPI and other agencies, along with the various expertise held across these stakeholders and central agencies. The composition of the PCB can ensure this;
- the project has significant technological risks that will need to be closely monitored and subject to ongoing review during implementation. Expert independent advice in this area (via the technology reference group and the technical expert on the PCB) can help assess and manage these risks; and
- efficient and effective delivery of the program requires the participation of energy businesses, so a forum for close liaison with these (the energy business reference group) is essential.

The **Project Governance** technical guide describes these and other considerations in establishing a governance regime.

### **3.8.2 Stakeholder engagement and communications plan**

This section asks agencies to provide detailed information about key stakeholders in relation to the project solution. This could include:

- identification of specific stakeholder commitments or requirements for the project solution, e.g. willingness to sign a lease;
- strategies and options to capitalise on social opportunities and manage negative issues;
- an outline of the wider implications, including the impact on any other proposals or opportunities that rely on this proposal or should be jointly considered (to give optimal cross-government outcomes);
- identification of the clients who are the intended end users of the proposed services (and where appropriate, provide information on the likely demand and any charging policies to recover costs – either in full or in part);
- any unresolved issues that need to be addressed before the project solution could proceed in its proposed form and to the proposed timetable;

- identification of stakeholder responses to the uncertainties of the project and to the Government's response to those uncertainties in the real options process;
- if a real options approach is being taken to this investment, a plan for communicating the flexible investment pathway (and possible changes to the direction if trigger events occur);
- a list of any current, expected or imminent projects, policies, events or other factors (social, political, economic, environmental, etc.) that could impact stakeholder support or opposition to the investment or project solution in the future (refer to Step 1 where necessary to avoid overlap); and
- possible public communication from the responsible Minister that considers stakeholders who may not be fully informed and may actively resist the proposal. It is important that designated speakers are nominated and adequately briefed.

A high-level stakeholder engagement and communication strategy for the project should be developed, and most likely will be being rolled out. Agencies are also required to attach as an appendix a high-level overview of this engagement and communications strategy, outlining the key messages and stakeholder plan if the investment were to move to:

- project announcement;
- procurement; and
- implementation.

It is important that the strategy has identified key stakeholders who will be impacted by the project solution, and also understand the influence they may have on the project. The strategy should demonstrate:

- the engagement has been thought out and planned;
- the agency is preparing to and/or is actively engaging with stakeholders; and
- the agency has a plan to respond to and measure the engagement.

**Business case information requirements for the stakeholder engagement and communication plan for the project solution**

- Outline key elements of stakeholder and communications analysis.
- Map and provide detailed information on the key stakeholders, their particular interests and likely/actual position in relation to the project solution.
- Present a brief overview of the proposed high-level stakeholder engagement and communications strategy or attach it as an appendix.
- The strategy should cover the approach to dealing with stakeholders both upon project announcement and ongoing during the project.
- If appropriate, identify specific stakeholder involvement required, e.g. funding.

## Stakeholder engagement and communications plan (fictional tourism example)

This case study highlights the type of information that should be provided in a business case on stakeholder engagement and communication for a fictional regional development investment.

### Stakeholder engagement and communications plan

The key stakeholders for the project solution include other Victorian Government agencies (especially Regional Development Victoria (RDV) and Tourism Victoria), the Outback Rural City Council, the Outback Development Corporation, and various businesses and community groups in the region including the local Indigenous community. These will be engaged through a number of strategies, reflecting the nature of their interest, the importance to the success of the project of their support and input, and timing considerations.

Engagement and consultation strategies are outlined in a high level, draft stakeholder engagement and communications strategy, which has been prepared for the project (see Appendix X). The table below summarises key elements of the draft strategy.

Stakeholder	Issues and risks	Future consultation actions
RDV and Tourism Victoria	The project must align with the programs and strategies of these agencies to best meet its objectives and deliver on Government policy priorities. There are no issues with these stakeholders, as they have been closely involved in the project and support it.	Ongoing input from RDV and Tourism Victoria is critical to the success of this project. These agencies will therefore be represented on the PCB, which will provide RDV and Tourism Victoria with the opportunity to inform and guide the project as it progresses.
The Outback Rural City Council and the Outback Development Corporation	Support from these bodies is important because they are highly influential in the Outback community and especially in business circles. Also, their local expertise will be useful in refining the project and local consultation strategies.  These agencies support the project in principle, but will be keen to ensure that they are closely engaged in its development and that the project meets the expectations of the Council and businesses. If this does not occur, there are risks of low vacancy rates within the development (which may increase project costs) and general community resistance (which may increase project timelines and costs).	The project director will meet regularly with the Outback Rural City Council and the Outback Development Corporation, to review progress and to gather ongoing input and advice.  Meetings will be scheduled around important milestones and activities, such as design development, media campaigns, the commencement of site works and construction completion. As a minimum, the meetings will be held bi-monthly.  This consultation will complement and inform broader public consultation processes throughout the Outback.
Local businesses and community groups and Indigenous community	The commercial performance of the project depends on take-up of leases by local businesses. There are financial risks if the expectations of these stakeholders (including over consultation, design and rentals) are not met.  Several community groups operate from premises that will be impacted by construction, and the site is also adjacent to important community spaces (the riverfront, parks, sites of cultural significance). For these stakeholders, it will be important to minimise disruption during construction, and that the site design is right for the area (including heritage values). Community resistance has potential to increase project timelines and costs.	Local businesses and community groups will be engaged regularly in a number of ways. Consultation with these stakeholders will have two high-level objectives: to disseminate information; and to solicit input and feedback.  A stakeholder advisory group (comprising representative of businesses and community groups) will be formed to consult to the PCB on stakeholder issues.  There will also be public information campaigns leading into key project milestones. This will involve media releases, interviews with the local media and media advertisements.

The draft strategy will be further developed in the project implementation phase. The proposed project management structure and project budget include resources for this activity and stakeholder engagement (assigned 0.3 FTE staff in 2012–13 and 2013–14).

### 3.8.3 Project management strategy

This guidance is based on the following key project management principles:

- a project is a finite process with a defined start and end;
- a project always needs to be managed in order to be successful; and
- for genuine commitment to the project, all parties must be clear about why the project is needed, what it is designed to deliver, how the outputs and outcomes are to be achieved, and their roles and responsibilities.

The purpose of this section is to outline the proposed project management strategy, framework and plans to support the design, build and implementation of the project solution. The strategy should be high level, but at the same time demonstrate its suitability and robustness, for example, identifying specific skills required and how these will be obtained to address project needs.

The strategy for the successful delivery of the project solution should use recognised best practice project management principles and project management methodologies and should be appropriate to the characteristics of the project. Detailed plans can be included as an appendix if necessary. A robust project management methodology is required to guide the project through visible, controlled and well-managed processes to achieve the investment benefits and deliver the investment as per the specifications outlined.

Where a real options approach has been taken to the project, this section should outline how the project management strategy will respond to a change in the direction of the project should trigger events be activated that cause the project to be scaled up, down, abandoned, change direction, etc. For example, where the Government has decided to scale down a project in relation to lesser climate change impacts than were originally anticipated, the project management strategy should outline how it would update its management processes to ensure smooth transition to the new direction.

#### **Business case information requirements for project management strategy for the project solution**

- Demonstrate that a robust project management strategy is in place.
- Include an up-to-date summary of the project management strategy addressing the following areas:
  - the suitability of the strategy;
  - the deliverables required;
  - the activities required to deliver them;
  - the activities required to validate the quality of the deliverables;
  - the organisational capability and systems and standards that would allow the project to be delivered successfully (this should include resources and time needed for all activities and any need for people with specific capabilities and competencies);
  - the dependencies between activities and any associated constraints;
  - the points at which progress will be monitored, controlled and reviewed. This includes key points during the business case development, such as Gateway reviews and any health checks; and
  - evidence that the implementing organisation has the capacity and capability to mobilise this investment.
- Include any detailed plans as an appendix if necessary.

### **Project management strategy (fictional energy example)**

The project management strategy for the investment proposal must be outlined in a business case, and its suitability demonstrated. This case study relates to a fictional project in the energy sector.

#### **Project management strategy**

Project management responsibilities and day-to-day requirements for the project would be performed by a dedicated project team in the department. The project team would comprise a total of five full-time equivalent (FTE) staff (a headcount of seven) that among other things would be responsible for project management, policy development, stakeholder management, project evaluation and secretariat support for the Project Control Board and the advisory groups.

The team is illustrated in Figure X and would comprise a project director (0.5 FTE), a project manager (1 FTE), a communications manager (0.5 FTE), three policy officers (2.5 FTE) and an administrative assistant (0.5 FTE). The following table provides an overview of the specific roles and responsibilities of each member of the proposed project team, and the rationale for their inclusion. Overall, the level and mix of resources within the proposed project team are considered appropriate because:

- there are a number of policy issues that will need to be subject to ongoing research and review. The project will also require extensive evaluation after its first phase. These tasks will demand significant 'policy' resources (2.5 FTE);
- effective communications and stakeholder management will be critical to the overall success of the project because there are many stakeholders (some of whom are essential to service delivery) and the project encompasses issues that are sensitive to parts of the community. This warrants dedicated communications resources (0.5 FTE); and
- there are several advisory groups that will need to be managed, so the project team will have significant administrative and secretariat responsibilities (0.5 FTE).

### **3.8.4 Change management**

Most investment proposals involve change that affects people, processes and resources, and this change needs to be managed by the implementing organisation, and often across multiple agencies. The scope of change can range from elements of service improvement through to major change to the machinery of government. Where change is not the main reason for the investment (e.g. a replacement service), a new investment provides an opportunity to think about doing things better and more efficiently. These opportunities should be considered where they improve the value for money of the investment.

Step 10 of the full business case process asks agencies to present a high-level overview of the change management strategy. The level of information required in this section should be scaled to the size and complexity of the change (if any) required to implement the project solution.

The major objective of the strategy is to assess the potential impact of the project solution on the systems, people, processes and culture in the organisation. The size and speed of change depend on the strategic drivers for change, the ability of the organisation to cope, and the level/skills of resources able to manage the change. The agency's choice of change management strategy should be set out at a high level and detailed as is appropriate to the materiality of the change to the delivery of the investment. Note this does not include management of scope changes proposed during implementation.

For significant change management programs, an outline of the change management plan should be provided, together with the communication and development deliverables (for example, training products) required for the implementation phase. It is important that this indicates how relevant personnel within the organisation, including human resources and staff representatives, have contributed or been involved to date. Reference should be made to the communications and stakeholder engagement strategy in the business case, which should also set out communication about change necessary to institute the investment.

If responsibility for the delivery of the service change lies with the project steering committee and is a key subset of its activities, then the change management framework should be outlined.

Where real options have been built into the project solution, this section should provide an overview of the trigger points that would activate real options and how any exit from one option towards a new direction would be managed. This is particularly important where such a change has significant impact on resources, documentation, assets, etc.

#### **Business case information requirements for the change management strategy for the project solution**

- Outline the scope of organisational/process change management required to manage the project and effectively deliver the benefits. This may involve systems, process re-engineering, staff retraining, etc., required to transition from existing arrangements to support the operation of the new investment.
- If change management requirements are significant, consider appending an outline of the change management strategy. Note this does not include management of proposed scope changes during implementation.

### **3.8.5 Performance measures and benefits realisation**

When developing new performance measures, or amending existing ones, departments should refer to *section 1.2 and Attachment 4 of the Resource Management Framework (RMF)*, available on the DTF website.

Performance management enables agencies to track the success of an investment in achieving the benefits it set out to achieve and is appropriately addressing the problem. For the purpose of evaluation, it involves the systematic collection of data relating to the financial management and outcomes of the project solution during implementation.

Performance measures are an essential source of information in the performance management process, indicating the extent to which project objectives and investment benefits are being achieved to ensure success.

This section requires agencies to update the benefit management plan, and to set out project-specific performance measures and monitoring systems that will be put in place to track benefits as they relate to the project solution.

There are three KPIs types:

- transactional – concludes in a numeric value;
- outcome – concludes in finished process; and
- output – is used in a further process to provide an outcome.

KPI descriptors can be quantitative – objective (capable of verification and validation) or qualitative – subjective (less capable of verification and validation).

Performance measurement processes should be set up to ensure that:

- projects have defined target benefits and outputs that relate to the overarching investment benefits;
- outputs of an investment remain consistent with Government objectives;
- costs are closely managed and monitored;
- action will be initiated when KPIs are not being met;
- forecast costs and benefits are frequently reviewed; and
- targets and achieved benefits are measured, reported to an appropriate forum and communicated.

Most investments will affect output performance measures. The impact on existing outputs and performance measures should be specified indicating both the changes to output metrics relative to current levels and the timing of that impact.

**Table 14: Performance measures**

Performance measures	Existing/ new/ not in BP3	Unit of measure	Baseline	Target if proposal is endorsed			
			20xx-xx published target	20xx-xx	20xx-xx	20xx-xx	20xx-xx
<b>Output: [Insert output name]</b>							
		Quantity/Q uality/Timel iness/Cost					

**Business case information requirements for performance measures**

- Provide a statement of investment benefits to show how well the project solution addresses the problem and key benefits.
- Provide information on project-specific performance measurement and monitoring systems. This should include detailed information on:
  - how well the project solution delivers identified investment benefits in a way that achieves value for money;
  - the management framework and KPIs surrounding the project solution’s performance measurement; and
  - an outline of the monitoring system to be put in place to track benefits realisation.
- Where the investment affects output performance measures, the impact on existing outputs and performance measures should be specified indicating both the changes to output metrics relative to current levels and the timing of that impact.

### 3.8.6 Risk management plan

While risk cannot be removed entirely, it can be managed. A risk workshop is often used to identify key project risks.

The business case requires a summary of risks to be included within individual sections of the business case. Step 10 should provide a more comprehensive risk analysis.

**Risk management is not a static process, therefore risk assessments should continue during proposal development (including the degree of risk sensitivity associated with assumptions used).**

Including a separate appendix addressing risk issues may be warranted for some projects and is required for all HVHR projects.

Where an investment may involve sharing of risk between the Government and the private sector, the risk management plan should identify how risk might be allocated and comment upon how the sharing arrangements will be managed.

To assist in identifying the key risks, Table 15 is a (non-exhaustive) list of risk categories and sources providing a number of perspectives from which agencies can consider project option risks.

**Table 15: Types of project risks**

Risk type	Explanation
Non-project specific risk (uncertainties)	May highlight the need for a flexible 'real options' approach to the investment, e.g. general financial markets risk, climate change, limited information available in market at this time.
Investment planning risk	The risk the investment proposal has not been rigorously prepared, meaning issues critical to success have been missed or costs, benefits and risks have been overestimated and/or underestimated.
Completion/construction risk	Relates to the development and implementation of the investment within the time and budget parameters.
Implementation risk	The analysis of implementation risk involves an assessment of the likelihood the proposed investment will deliver the targeted outcomes and outputs.
Management risk	The ability of management to deliver the expected outcomes.
Operations risk	Operations risk is dependent upon the nature of the integration of the recommended project with other underlying operations of the enterprise.
Financial risk	Financial risk is dependent upon the investment's financial structure. Interest rates, taxation treatment, timing of cash flows and ability to absorb losses.
Environmental risk	Relates to the impact of the proposal upon the natural environment.
Private sector risk	Risks include the ability of the private sector to manage the allocated risks and to deliver the outcomes (i.e. funding, implementation, management, operation, etc.).
Political risk	These risks arise from commitments or actions of politicians. Investments sometimes create a polarisation of interests in the community, which can create political risks if not managed appropriately.
Stakeholder risk	Arises when there are varied and conflicting expectations of investments, or if there is significant commitment required by a stakeholder to ensure the project's success.

The risk assessment should also include those risks relating to PDDD elements, or the risk of not having addressed certain PDDD elements.

#### **Business case information requirements for the risk assessment and management for the project solution**

- A high-level overview of the risk planning methodology for the project solution.
- An overview of the risk strategy for the project solution, including identification of all relevant risks (risk causes, risk events and risk impacts) of the project solution (including procurement and governance), along with associated mitigation strategies.
- Provide additional commentary on the risks of the project solution noting the impacts on various stakeholders.
- Outline of plans for risk ratings reviews and capture of any new risks, along with responsibility for ongoing risk monitoring/management.
- Include an appendix with the risk management strategy and risk register.

#### **Risk assessment and management (fictional example)**

The business case should provide details of the process through which the agency will manage project risks. This case study illustrates how a business case might satisfy this requirement.

Risk assessment and management

##### **Ongoing risk monitoring and management**

A draft risk management strategy for this project has been developed (see Appendix X), which outlines the process for managing risks and responsibilities. Its purpose is to assist management decisions on how to deliver the objectives of the project within specified constraints (e.g. time, quality and cost).

Risk will be identified and categorised as either strategic or project level risks. Strategic risks will be those expected to have broader impacts beyond the project, for example, inter agency risks and statewide risks. These may have state or regionwide significance and require high levels of management and coordination. Project level risks will be those with specific impact on the project's ability to meet its objectives or operate within the specified constraints (but will not have broader ramifications).

Key features of the proposed risk identification and management process are:

- all risk treatments will be assigned ownership and treatment actions will be incorporated into the project work plan;
- the status of each risk will be assigned as open or closed. When risks are completely mitigated through some form of treatment or completion of a project milestone, these will be listed as closed (but not deleted); and
- a risk profile for strategic and project risks will be identified and managed using a dedicated risk register.

Risks will be managed within the governance structure for the project. Within this structure, the project control board (PCB) will be responsible for endorsing treatments for strategic risks and project risks with high consequence and/or likelihood ratings. The project director will be responsible for monitoring and reassessing risks and risk ratings, maintaining and updating the risk register, identifying potential treatments for risks and escalating risk management to the PCB as appropriate.

### 3.8.7 Exit strategy

Detail the exit strategy and the factors that would lead to wanting to exit either early or at term. Investments maybe time limited or may involve pilot studies. This section allows for consideration of what termination rights are desirable at key review or decision points, for example, in lapsing programs.

### 3.8.8 Readiness and next steps

#### **Business case information requirements for readiness and next steps**

- Explain plans to transition the investment to Stage 3: Delivery.
- Explain the main areas of risk and uncertainty to be resolved in the next stage (including closing gaps in PDDD requirements) and highlight options to manage these.
- Include information, for example, regarding staffing, approvals, and land acquisition.
- Include summary details of the exit strategy and handover of the project beyond its delivery.

### 3.8.9 Sign-off

Sign-offs are required by the:

- primary author;
- SRO (or departmental Chief Financial Officer) on the Project Profile Model (PPM) included to update proposal risks; and
- SRO (or Chief Financial Officer) and the department's Secretary on the full business cases to be considered by the Government.
- The SRO is also required to attest that the proposed investment will deliver the operational outcomes outlined in the business case.

In establishing the project budget estimate, the SRO should sign off on:

- the statements of the service benefits and project scope; and
- the adequacy of the project budget including the base cost estimate, risk assessment, base risk allocation and contingency.

This should be supported by additional sign-offs from:

- the base cost estimator; and
- the agency and its advisers on base risk allocation and contingency.

Agencies should also provide details of any review process (e.g. for HVHR projects Gateway reviews are mandatory).

So that decision-makers know that the business case is thorough and complete, please provide a quality assurance checklist with business case submissions seeking endorsement from departmental secretaries.



