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## ICT Guideline

## Business Case

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# 1. About this Document

## 1.1. Introduction

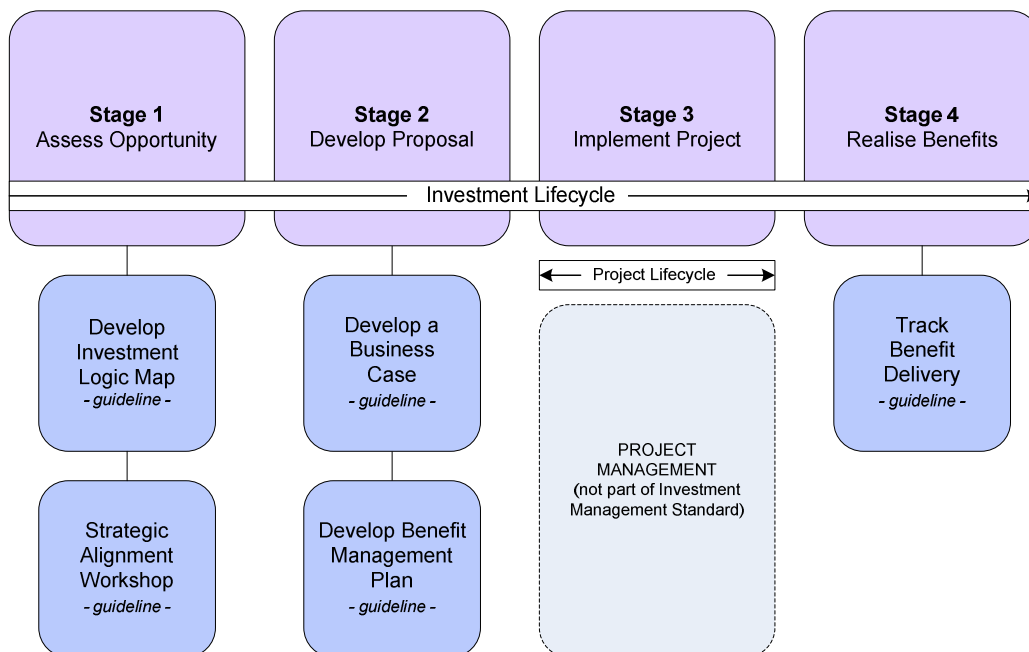
The ICT Business Case Guidelines have been developed to improve investment decision-making for expenditure in Information and Communications Technologies (ICT). They support better investment decisions in two ways:

- by enabling the range of potential benefits that the investment will generate to be understood, quantified and properly considered, and
- by increasing the level of confidence that the potential investment will be successful in delivering the claimed benefits.

In using a consistent approach and format across government they also enable better prioritisation and ranking of potential investments. They have also been designed to be scalable in that so that they will be able to provide useful and practical value to people preparing business case material irrespective of the size of the project. The ICT Business Case Guidelines incorporate the requirements for business cases defined by the department of Treasury and Finance's Gateway process along with those factors requiring specific consideration for ICT investments.

These guidelines have been issued under the whole of government ICT policy and standard on investment management. The following diagram illustrates the relationship between the different aspects of good investment management. The business case should be completed during Stage 2: Develop Proposal, and should be built around the investment logic map developed during the previous stage.

**Figure 1: The Investment Management Guidelines**



## 1.2. Objectives

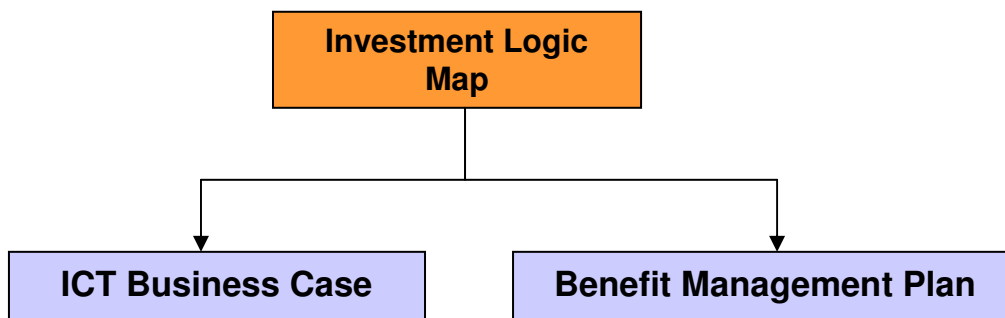
The objectives of the ICT Business Case Guidelines are as follows:

- Assist departments to adopt a more consistent approach in building an ICT business case, which will provide strategic assessment, options analysis and the basis for recommendations for ICT investments through out Victorian government.
- Identify the information requirements of a good business case.
- Facilitate better presentations of business cases to support ICT investment proposals in the budget process.

## 1.3. Before you start

The best way to drive a successful ICT investment requires rigorous planning from the beginning of the investment cycle. Base on the feedbacks from the senior executives from various departments, the Office of the Chief Information Officer recommends the development of Investment Logic Map (Refer to Benefit Management Standard) before the development of the ICT business case. The Investment Logic Map helps Business Case Managers to identify the key business drivers, project objectives and expected benefits for any ICT investment. These information can then be used in the development of the business case and Benefit plan later on.

**Figure 2 : Developing investment logic**



## 1.4. Audience

The ICT Business Case Guidelines have been developed to provide high level guidance to Victorian government departments and agencies on the steps and inputs required for the development of business cases to support ICT investment proposals. The Guidelines are specifically targeted to projects that intend to be considered at some stage by the Expenditure Review Committee, however, they provide useful guidance for all ICT projects. These guidelines reflect the approach that the OCIO is taking in their role to prepare and evaluate ICT projects as part of the budget process.

## 1.5. Overview

These guidelines:

- provide a logical structured approach for the development of ICT business cases;
- set out the expectation of information requirements through the provision of a template for the final business case;
- include recommendations and tips on the contents for each components of the business case; and
- include several sets of tools which departments may use to develop stronger arguments to reinforce the benefit claims in the business case if required.

The guidelines do not advocate specific tools or approach to the development of the contents in each components identified in the business case template. It is anticipated that the departments will have a degree of flexibility in applying these Guidelines and will adopt the recommendations as appropriate to their proposal.

## 1.6. Applicability

The ICT Business Case Guidelines has identified the information that is required in a business cases. These requirements form the basis of the recommended components in the business case template. The template can be used for potential investments of any size and characteristics. The business case components should be included in all business cases; however, the level of details in each component is discretionary, depending on the project size and relevance of the component in relation to the ICT investment. In smaller business cases, if a component does not add strength to the quality of the business case, or is not relevant, it should be labelled “Not Applicable”. For more information on the applicability of each section, please see Appendix C.

## 1.7. Timing

An ICT business case should be prepared for any ICT asset proposal. The need to prepare a business case should be assessed on a case-by-case basis by departments, rather than purely on the basis of a dollar benchmark. Departments are responsible for determining the level of analysis required in the business case – in terms of the number of business case elements addressed and the depth of analysis of each which should correspond with the nature, size and complexity of a project.

Departments should use the Gateway Review Process Project Profile Model (if not already completed during earlier proposal stages) to gauge project risk and complexity and determine the depth of analysis required for the business case.

Preparing a business case can be resource-intensive. Sufficient resources should be allocated upfront by departments for proposal development. For more detailed assistance, departments and agencies are able to access the expert panels that DTF establishes from time to time to assist departments and agencies in a range of related activities, including business case development.

## 1.8. Benefits

There are benefits to departments and agencies in making early contact with the OCIO when developing business cases for ICT projects. The OCIO has responsibility to drive ICT policy and strategy within government and has whole-of-government responsibility for:

- innovative use of ICT to transform government service delivery;
- investment in ICT to address the government's priority outcomes;
- strategic planning for ICT deployment across government; and
- architecture planning and standardisation of corporate ICT infrastructure.

Consultation with the OCIO is recommended at the early stage of business case development in order to:

- review and confirm the overall approach to business case framing and project funding; and
- assess the scope of alignment with government priorities, synergies with other ICT initiatives and other interdependencies as required.

The consultation should be undertaken for both agency-led and Whole of Victorian Government (WoVG) ICT projects, regardless of whether these are bidding for Expenditure Review Committee (ERC) funding or not.

## 1.9. Relationships

### 1.9.1. Gateway

Whilst intended as a stand-alone resource on business case development processes and information requirements for ICT projects, the *ICT Business Case Guidelines* are built on the general *Business Case Development Guidance Material* for asset proposals, which was endorsed in August 2003 as part of the Gateway Initiative. This ensures consistency with the approach to asset investment across the Victorian General Government Sector.

A Gateway Review may need to be initiated as part of the business case development process, depending on a project's risk levels. The Gateway Review process is developed to assist departments in managing project risks and ensuring compliance with budget allocation parameters. There are six stages or "gates" under the Gateway Review. A project's status may be reviewed through each or some of these stages. The Project Profile Model (PPM), available from the Gateway Unit, is used to assess risk levels relating to a project's scale, complexity and/or innovation and to determine the need for a Gateway Review.

Importantly, the document outputs arising from the *ICT Business Case Guidelines* would meet with the document requirements arising, from the Gateway Review process (should a Gateway Review be required due to a project scale or complexity). This ensures that business case managers are not faced with a requirement to develop multiple outputs for the same project.

#### **Gateway Website:**

<http://www.dtf.vic.gov.au/DTF/RWP323.nsf/headingpagesdisplay/Gateway+Initiative?OpenDocument&Expand=5&>

### 1.9.2. Investment Evaluation Policy and Guidelines

The *ICT Business Case Guidelines* introduces a spreadsheet template – the *Investment Evaluation Matrix* – as a tool that can be used in the cost-benefit analysis of ICT projects. This tool incorporates key aspects of the *Victorian Government Investment Evaluation Policy and Guidelines* (IEPG) that was published by the Department of Treasury and Finance in 1996. The guidelines also integrate legitimate concepts of ICT project value based on the evolution of value or benefit measurement for ICT projects in Victoria and in other leading international jurisdictions.

### 1.9.3. Benefit Management Policy and Standard

Benefit management is the process of ensuring that:

- the benefits from ICT are more effectively identified, defined and evaluated prior to approval of an investment; and
- once approval has been given, the benefits can be monitored over the life of the investment and will be reported at regular intervals.

While the identification and definition of benefits is traditionally undertaken during business case development, the *Benefit Management Standard* adds greater rigour to the process. The standard also provides for better benefit management through provision of processes and tools for the ongoing monitoring of benefits to the point of investment maturity.

It is important to note that benefit management is a business activity rather than an ICT activity. The benefits may arise as the result of the introduction of new ICT investment, but this must be coupled with changes to the way business operates. Benefit management is “the process of organising and managing such that the potential benefits arising from the use of ICT are actually realised”.<sup>1</sup>

All investments should result in benefits of either a financial (monetary) or non-financial (quantifiable) nature. Benefits that can be realised may be as diverse as financial return to consolidated revenue or more accessible health care for the disadvantaged within the community.

### 1.9.4. Benefit Classification Model

The Benefit Classification Model (Appendix D) was developed to help identifying the range of benefits that ICT investment can enable. They consist of two primary layers of Benefit Groupings, called Outcomes Benefits and Enabling Benefits:

- Outcome Benefits relate to the end outcomes to be delivered through the proposed initiative to the end user or community stakeholders.

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<sup>1</sup> J. Ward. Benefit Management: Best Practices Guidelines. Cranfield School of Management: 2004

- Enabling Benefits are associated with capability building, infrastructure development and integration across government that is necessary to generate future Outcome Benefits (that is, Enabling Benefits are only justifiable if a link to future Outcome Benefit can be demonstrated).

Each primary layer is further broken down into a secondary layer of Benefit Categories, and then a tertiary layer of Benefit Types, as illustrated in Figures 1 and 2.

- Benefit Categories relate to the component service objectives of the Victorian Government ICT strategy.
- Benefit Types provide appropriate and consistent groupings for capturing the direct and indirect benefits of ICT initiatives, and form the basis for selecting relevant benefit value measures (using KPIs). Generic descriptions of the different benefit types are provided in Figures 1 and 2 to guide the mapping of benefits.

## 2. How to create a business case

### 2.1. Business case template

This section outlines a template that may be used to build a business case. The template encompasses the full components of the final business case. While this business case structure should be suitable for all kind of ICT investments, the level of information required in each component of the business case will vary depending upon a number of factors such as: project need, project size, funding needs, political significance or public interest. All of these factors will have to be considered by the department when assessing the level of detail required in each of the business case components.

**Table 1 Business case template**

Components	Key features
<b>1. Executive Summary</b> 1.1 Business concept 1.2 Summary options analysis 1.3 Recommendations (and rationale) 1.4 Reference to supporting documents	Succinct summary of the proposal, key issues and implications as well as big picture overview as a basis for decision making.
<b>2. Project Objectives and Scope</b> 2.1 Project objectives 2.2 Alignment with Government priorities 2.3 Primary benefit identification and KPIs	Clear statement of proposal objectives and scope; convincing evidence of alignment with government and department priorities. Review of objectives in social/economic context. Complete and accurate representation and non-technical justification.
<b>3. The Investment Logic</b> 3.1 Investment Logic Map	High level representation of the benefits expected from the investment, including identification of the interdependencies between those benefits and the other aspects of the project (the drivers, objectives, business changes and IT enablers).
<b>4. Description of Service Need</b> 4.1 Scope of service delivery 4.2 Contribution to identified outputs/measures	Clear and succinct description of all elements of outputs/services to be provided including scope and value for money.
<b>5. Stakeholders Identification</b> 5.1 Stakeholder relationships and impacts 5.2 Consultation plan	Identify key stakeholders, nature of relationships, potential impacts on proposal, reliability of stakeholder provided information, and clients/users of service, and where appropriate demand and charging policy.
<b>6. Summary of Options</b> 6.1 Present service delivery performance 6.2 Shortlist of options 6.3 Feasibility/reality check 6.4 Business changes required	More detailed assessment of 2-3 options building on the options analysis; present service performance and future, scope to contract out, trade-off maintenance / capital costs, staging options, strategic thinking and feasibility/reality check. High-level business changes should also be identified in this section of the business case.
<b>7. Critical Assumptions and Constraints</b> 7.1 Capital and operating drivers 7.2 Regulatory or policy constraints 7.3 Assumptions and their sensitivity	Explicit documentation of project specific assumptions on demand, market, environment, financing and availability, resources and expertise; constraints incl. Regulatory, legislative, policy etc and sensitivity analysis on these.



<p><b>8. Social and Environmental Analysis</b> 8.1 Social and environmental outcomes 8.2 Mapping quantified and non-quantified benefits</p>	<p>Identify and account for all significant social and environmental outcomes, compliance and community concerns (detail issues or opportunities and related strategies). Quantify or rank for cost-benefit significance.</p>
<p><b>9. Economic and Financial Analysis</b> 9.1 Economic and financial outcomes 9.2 Mapping of quantified and non-quantified benefits 9.3 Integration of benefits and impacts 9.4 Scoring options</p>	<p>Detailed analysis of economic costs and benefits and relative financial costs and benefits of options including full lifecycle costs. Analysis should integrate qualitative and quantitative measures of Socio-Economic Analysis in an overall Cost-Benefit Analysis.</p>
<p><b>10. Risk Analysis and Management</b> 10.1 Material risks and management strategies 10.2 Risk adjustment to options scores</p>	<p>All material risks (inc. non-project specific risks) and proposed management strategies including identification of who is best placed to bear risks.</p>
<p><b>11. Procurement Strategy</b> 11.1 Strategy to procure service</p>	<p>Outline strategy to enable procurement of the service or project including consideration of PV.</p>
<p><b>12. Budget Analysis and Funding Strategy</b> 12.1 Changes in operating budget 12.2 Net capital cost impacts 12.3 Proposed funding sources</p>	<p>Identify operating budget and capital cost over lifecycle, illustrate how the preferred option meets objectives and allows decision makers to select the option that delivers the best outcomes under any other constraints (eg. budgetary or investment mix) facing government.</p>
<p><b>13. Public Interest Issues</b> 13.1 Management of public interest issues</p>	<p>Detail issues such as accountability, transparency, consumer rights, access which will have emerged through strategic assessment and options analysis. Indicate how these are to be addressed.</p>
<p><b>14. Implementation and Timing</b> 14.1 Project delivery milestones and timetable 14.2 Implementation issues and management strategies</p>	<p>Strategies for implementation including timing, project readiness, site acquisition, planning and environmental management requirements, resource implications, etc.</p>
<p><b>15. Recommendation of the Preferred Options</b> 15.1 Integrated Results of Preferred Option 15.2 Clear recommendation</p>	<p>Clear recommendation of preferred option and reasons for the recommendation.</p>
<p><b>16. Sign-off</b> 16.1 Details of review process 16.2 Sign-off</p>	<p>Primary author, review processes, CFO and Departmental Secretary if going to ERC.</p>

## 2.2. Information Requirements

The following sections provide high-level guidance on the analysis and information requirements for each component of the business case for an ICT project as identified in table 1. The Gateway Business Case Development Guidelines and the IEPG should be referred to for additional technical guidance on business case development as required.

### 2.2.1. Executive summary

The executive summary is a particularly important part of a business case. It is presented as a stand-alone companion document to the main body of the report and is prepared once all other sections of a business case are complete. It must contain a clear, concise, plain English outline of the whole proposal, including the rationale for proceeding with the recommended option because:

- decision-makers will primarily consult the executive summary. It must therefore convey a quick and explicit understanding of the arguments, the key issues and the major implications, without undue detail; and
- often, only the executive summary is submitted to the ERC, with the full business case submitted only where necessary.

For an example of the contents of an executive summary, see Section 5.4 of the Gateway Business Case Development Guidelines.

**Supporting documentation** – Key supporting documentation should be referenced in the Executive Summary, and should accompany the full business case to provide detailed support to the investment. Key examples of supporting documentation are; a financial model underlying the option analysis performed, details of capital and infrastructure costs, and copies of design drawings.

## 2.2.2. Project objectives and scope

This should provide clear statements of the objectives and scope of the proposed initiative and its connection to government ICT policy and the department's strategic priorities (eg. enterprise architecture planning).

Project objectives must be service-focused and defined in measurable terms, which nevertheless, are of a high level and broad enough to accommodate any changes to definitions of service levels or requirements, as they may be refined during the development of the proposal. The factors to consider in defining the objectives and scope of the proposed investment include:

- Strong and convincing evidence is required of the degree to which the proposed investment aligns to government ICT policy and department's strategic plan.
- The objectives should be reviewed in the wider social and economic context.
- Include key performance indicators (KPIs) and/or measures relating to the initiative to indicate how performance in meeting the project objectives will be measured. Guidance on how to develop quality KPIs can be found in the Benefit Management Standard.
- The proposed objectives need to be completely and accurately represented and justified in non-technical terms.
- The objective and the scope should be re-examined and be reaffirmed at each significant milestone throughout the project development process.

At the whole-of-government level, an ICT project should be aligned with *'Putting People at the Centre'*, which aims to:

- substantially improve support and services to citizens;
- provide better community engagement and more effective democracy;

- use innovation in finding new opportunities; and
- create a framework for ongoing reform within government.

At the departmental level, a clear linkage to the corporate ICT strategy needs to be demonstrated. The strategy may be to reduce costs and improve efficiencies, align functions and processes and/or enable integration and interoperability.

### 2.2.3. The investment logic

All business cases should include an Investment Logic Map. Where the business case is to be considered by ERC, the Investment Logic Map is mandatory. Prior to the business case being approved, an OCIO facilitated workshop should be conducted, in which the following key questions are addressed. That is, what are the drivers, objectives, benefits, business changes and IT enablers for this investment, and how important are they?

As these questions are being answered, it should be mapped in a way that identifies the relationships between the drivers, objectives, benefits, business changes and IT enablers (components). Often this process allows for new dependencies to be identified between the different components. As well as acting as a test of the logic behind the justification for this investment, the Investment Logic Map can also act as a valuable communication device and project management tool. Colours can be added to signify level of risk, benefit or dis-benefit, and so on. The primary consideration must be that wherever possible, components must be as explicit and clearly stated as possible.

**Supporting documentation** – Key supporting documentation includes the benefit management plan, which is the OCIO recommends be appended to all business cases.

### 2.2.4. Description of service needs

A clear and succinct description must be given of the service needs which would be addressed as a result of the project and how these needs are necessary for achieving government policy directions and objectives. The description should also include, where appropriate, the level of service to be satisfied and how urgent or critical the service requirement is in the context of government and department priorities.

Service requirements can originate for a number of reasons, including:

- demand for new ICT service;
- strategic systems infrastructure;
- sustaining a service level;
- cost efficiencies;
- developing enterprise architecture capability; and

- new government policy to achieve cross-agency integration.

These and other needs represent the 'drivers' for the proposed investment and must be made very clear in the business case.

The business case must also demonstrate that the key benefits of an ICT project directly contribute to meeting the identified service needs. For example, an agency's services may be heavily driven by requirements to promote equitable access principles and increased cross-agency integration. The benefits of initiatives proposed by the agency must be clearly consistent with these service needs. Benefits that meet this criterion include provision of enhanced availability of online services to remote communities or the provision of new multi-stakeholder information system which joins up previously disparate systems.

The specific benefits arising from an initiative are expected to be discussed as part of the social, economic and financial analyses of a business case and built into the *Investment Evaluation Matrix* (a tool for undertaking the cost-benefit analysis of options, presented in Section 2.2.9.1). It is however important that the core benefits to be generated by a proposal be identified early on in the business case, in the context of the service needs to be achieved. Benefits may encompass outcome benefits (end user benefits), enabling benefits or strategic project benefits depending on the nature of the project and service drivers.

## 2.2.5. Stakeholder identification

Key stakeholders need to be identified, noting that this often includes other government departments (including the OCIO), other levels of government, third parties including non-government agencies and the public. The key considerations to make when identifying stakeholders to:

- Provide a summary of the nature of these relationships and the potential impact of the proposal. This may include the impact of the proposed investment on the existing systems infrastructure of a department. A high-level consultation plan needs to be included.
- Present the wider implications and interdependencies of the proposal, including the impact on any other proposals which are dependent on this proposal or should be jointly considered to give optimal cross government outcomes.
- Have the key stakeholders who are providing information been able to certify the accuracy of information submitted?
- The clients who are the intended end users of the services proposed also need to be identified and, where appropriate, information should be provided on the likely demand and any charging policies to recover costs (either in full or in part).

## 2.2.6. Summary of options

A range of options should be considered including both asset and non-asset solutions. As a guide, alternatives to be considered include:

- Non-asset alternative – Service needs may be met without creating additional assets through redevelopment of an existing system, contracting out a service or developing initiatives to manage demand more effectively.
- Asset solution – New investments in assets may be established, with sub-options being the in-house development of an asset, 'off-the-shelf' acquisition, or 'joined-up' government opportunities.

The following considerations should be made when identifying all possible options of the proposed investment:

- Generally two or three options should be included in the shortlist, the two options which are most likely to deliver the desired outcomes and the 'do nothing' or minimal approach option.
- Information on the present service delivery performance or condition and performance and utilisation of existing infrastructure needs to be considered.
- Describe the impact on related services and assets and opportunities for integration with other government services demonstrating consideration of joined-up government.
- Provide details of capacity for variations to the design and/or life of the proposal.
- Provide an assessment of the scope to trade-off capital and maintenance costs.
- Are there interim or staged implementation solutions available?
- Include information on whether the proposal, or some aspect of existing operation, can be scaled down or closed.
- Detail the level of strategic thinking and the investment of departmental and other resources in the development of the business case.
- Does the proposal and associated options demonstrate the application of best practice ICT management principles?
- Provide information on whether and how the delivery options are feasible and realistic.
- Base on the Investment Logic Map, identify the high level business changes required for the options identified.

### **2.2.7. Critical assumptions and constraints**

Statements of critical assumptions or constraints for the proposal need to be explicitly documented to define the context in which a proposed initiative is being presented. Key considerations in identifying assumptions are:

- The assumptions and constraints defined must be proposal-specific and must include identifying at the earliest possible stage all critical assumptions, including demand, market or demographic factors, architectural parameters, alignment with data standards (including local, national or international standards), financial drivers, availability of resources and expertise.
- Any known or emerging constraints directly impacting on the proposed investment should be outlined, including any design constraints, security needs or dependencies on the performance of other existing or proposed infrastructure.
- Details of all external influences including regulatory, legislative, policy issues and relevant Acts need to be provided.
- Information on the sensitivity of assumptions needs to be provided, including the potential impact of significant variations in assumptions. The sensitivity analysis process involves changing the key parameters and assumptions of the proposal and examining the effect its desired outcomes.
- By assessing the impact of changing key proposal variables and assumptions, decision-makers can be confident that a comprehensive review of the business case has been considered, including both the optimistic and pessimistic views.

### 2.2.8. Social and environmental analysis

Traditional return-on-investment (ROI) calculations, whilst important, may not fully account for the total value of ICT projects. This issue arises from changing notions of value associated with the spread of communications technologies and increasing attempts by government to provide services that are more focussed on citizen expectations. An analysis of the nature and extent of social and environmental impacts of each project option along with the economic and financial impacts is therefore fundamental to provide a comprehensive assessment of value from an ICT project. The social and environmental analysis should:

- identify any significant social and environmental issues or opportunities directly attributable to the proposal;
- identify the stakeholders involved;
- outline the nature and extent of the impact on each stakeholder; and
- develop strategies and options to deal with any negative issues.

Issues identified in the analysis should be stated clearly in the business case so that they are transparent to decision-makers and inform them of any policy implications, employment opportunities or community reaction to the proposed initiative. Any social or environmental benefits identified in the Investment Logic Map should be addressed here.

Further assistance is provided in Chapter 7 of the IEPG.

Describe any qualitative social and environmental benefits here – do not include these benefits in either the Investment Logic Map (2.2.3) or the Investment Evaluation Matrix (2.2.9.1).
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### 2.2.9. Economic and financial analysis

This is to include detailed analysis of the economic costs and benefits of each option under consideration and an analysis of the relative financial costs and benefits. Some economic impacts can be quantified in dollar terms such as cost savings to users, others can be measured in statistical or physical terms using KPIs (measurable impacts). The economic analysis of an ICT project is unlikely to be simple given the potential scope of economic impacts on a wide range of users, communities and government agencies, many of which are difficult to measure, much less to value in dollar terms.

Considerations of distributional impacts for whole-of-government or cross-agency initiatives are equally important. These should account for impacts on users, communities and agencies including clarification of how economic costs and benefits are shared between participating agencies. All assumptions need to be clearly documented.

Whilst in some instances departments and agencies may have the requisite skills to undertake their own economic evaluation, there will be other investment proposals which will require the services of a credible external consultant. As a minimum, departments and agencies should be in a position to identify the type and nature of likely economic impacts which may arise from a proposal. Such financial or economic benefits may be identified through development of an Investment Logic Map. These should be identified prior to engaging an external consultant.

A financial analysis is used to determine the costs and quantifiable risks of a proposal from the government's perspective. A comparative measure of the costs and benefits must be evaluated for each option and will demonstrate the level of cost recovery expected.

Issues to be considered:

- A financial analysis does not take into account any benefits to the beneficiaries that are not captured as a revenue stream of the proposal. Monetary impacts to users or the community represent quantifiable economic benefits.
- Agency-specific business improvement initiatives need only consider agency costs and benefits (or cost savings).
- Whole-of-government or cross-agency initiatives must consider costs and benefits from a broader perspective and look to how participating agencies share the benefits, costs and risks.
- Benefits included in the cash flow analysis should be limited to direct benefits only; flow-on effects or unrelated factors can be mentioned but should not be included in the cash flow analysis.
- The Net Present Value (NPV) is the preferred financial measure. Others that may be used include cost per unit of service, net present value per capital invested, equivalent annual cost, internal rate of return, benefit cost ratio (BCR) and payback period.
- All assumptions are to be transparent, and include information on full lifecycle and recurrent costs.

- The economic and financial analyses should use discounted cash flows in determining the net quantifiable costs and benefits of a proposal. The IEPG (section 6.2.3) sets out the relationship between project risk and discount rate.

More detailed guidance on social, economic and financial analyses can be found in sources such as Chapters 6 and 7 of the IEPG.

Describe any qualitative economic benefits here – do not include these benefits in either the Investment Logic Map (2.2.3)

## 2.2.10. Risk analysis and management

The business case must identify all material risks associated with delivering the proposal, an indication as to who is positioned to bear those risks, and a proposed means to manage risk. There will be a potential range of project specific risks and some non-project specific risks to be addressed. To assist in identifying the various risks inherent in a proposal, the following types of risk should be considered (although the following is not meant to be exhaustive):

**Table 2** Types of Risks to Consider

financial	obsolescence
specification/scope changes	residual value
commissioning delays	upgrade
completion	organisational
customer needs (not met)	security
change in law/policy	management
contractual	political
implementation	operational

Risks such as these need to be assessed for the business case on an ongoing and routine basis during proposal development (including the degree of risk sensitivity associated with assumptions used). A process for risk management planning should also be included.

Guidance on risk management is provided in sources such as Chapter 10 of the IEPG and the *Partnerships Victoria Risk Allocation and Contractual Issues* guide (June 2001) and *Partnerships Victoria Public Sector Comparator Technical Notes* (June 2001 and July 2003).

The Victorian Government has also developed a project management approach to software development called southernSCOPE (see [www.egov.vic.gov.au](http://www.egov.vic.gov.au)). It can help initiatives to be completed successfully and avoid software budget blowouts.

## 2.2.11. Procurement strategy

The business case needs to provide an outline of the procurement strategy if goods or services are to be purchased as part of the project. The possibility of a *Partnerships Victoria* method of delivery is to be fully and objectively considered for initiatives where, for example, there are opportunities for delivering value for money and innovative solutions. The project scale, complexity, scope for risk transfer and market appetite are some of the attributes to consider in assessing the potential for a *Partnerships Victoria* method of delivery.



### 2.2.12. Budget analysis and funding strategy

A budget analysis should be included in the business case to allow decision-makers to consider the option that will deliver the best outcomes in line with government objectives and have a demonstrable impact on output/service delivery performance. Where hard budget constraints exist (where funding sources are not available or are not endorsed for the proposed investment), the option that provides the highest net benefits will not always be selected. Instead, decision-makers may select the option that maximises net benefits within the overall budgetary constraints and investment mix.

The budget analysis must identify the operating budget (revenue and expenses) over the proposal's lifecycle and the capital cost impacts over its life (initial costs and any known renewals requirements) together with cash flows for each financial year over the forward estimates period. It should outline:

- the impact on the department's outputs and associated outcome targets (i.e. measurable impact on performance);
- the cost impact including all changes to revenues and expenses (capital charging, depreciation equivalent as well as maintenance etc.) and the impact on the net cost of agency outputs;
- asset investment requirements (capital costs); and
- cash outflows and inflows, including explicit identification of the proposed funding sources and details of any financial arrangements including user charging and joint agency contributions.

### 2.2.13. Public interest issues

Where appropriate, detail the public interest issues (e.g. accountability, transparency, consumer rights, access). These should have been highlighted during the earlier stages of the business case. Include information on how those public interest issues are going to be addressed. Refer to the *Partnerships Victoria Practitioners' Guide (June 2001)* for further explanation of public interest issues.

### 2.2.14. Implementation and timing

An implementation strategy should consider:

- Project schedule information, including information on potential competing priorities, skills capabilities, staff availability, and contractor expertise and experience, etc.
- Actions necessary to progress a proposed investment have been adequately identified.
- Implementation issues and the strategies for their resolution.
- Resourcing implications for the department.

- Outline a strategy to address marketing and communication including, where required, public communication from the responsible Minister.
- Timing and delivery sequencing requirements and the expected lead time. A realistic timetable should be developed outlining the key delivery milestones.

### **2.2.15. Recommendation of the preferred option**

A clear recommendation is required for the preferred option. The reasons for the recommendation should also be stated, succinctly and unambiguously. The recommendation (which should also be included in the executive summary) should be clear and directly refer to the objectives outlined at the beginning of the business case.

### **2.2.16. Sign-off**

It is important that the primary author of the business case is identified and signs it off. Details of any review process should be included as well as the signature of the Chief Financial Officer and the Department's Secretary (where the business cases is to be considered by ERC).

## Appendix A – References

Gateway Initiative Business Case Development Guidelines, August 2003, Department of Treasury and Finance, [www.dtf.vic.gov.au/gateway](http://www.dtf.vic.gov.au/gateway)

Gateway Strategic Assessment Template, [www.dtf.vic.gov.au/gateway](http://www.dtf.vic.gov.au/gateway)

Investment Evaluation Policy and Guidelines, 1996, Department of Treasury and Finance, [www.treasury.vic.gov.au](http://www.treasury.vic.gov.au) or <http://intranet.vic.gov.au/BudgetGuide/default.htm>

*Partnerships Victoria* Guidance Material, [www.partnerships.vic.gov.au](http://www.partnerships.vic.gov.au)

*Growing Victoria Together*, [www.growingvictoria.vic.gov.au](http://www.growingvictoria.vic.gov.au)

*Putting People at the Centre* (Victoria's eGovernment Vision), [www.mm.vic.gov.au](http://www.mm.vic.gov.au)

Strategic Business and ICT Planning Framework (Discussion Paper), 2004, Office of Chief Information Officer

Functions point analysis guidelines (for assessing cost estimates), Office of Chief Information Officer, [www.egov.vic.gov.au/Victoria/StrategiesPoliciesandReports/Strategies/SouthernSCOPE/sthnscope.htm](http://www.egov.vic.gov.au/Victoria/StrategiesPoliciesandReports/Strategies/SouthernSCOPE/sthnscope.htm)

Standard Corporate ICT Infrastructure Strategy Report, January 2003, Office of Chief Information Officer, [www.dpc.vic.gov.au](http://www.dpc.vic.gov.au)

Value Measuring Methodology Highlights, 2002, US Federal CIO Council, [www.cio.gov](http://www.cio.gov)

Value Measuring Methodology How-To-Guide, 2002, US Federal CIO Council, [www.cio.gov](http://www.cio.gov)

## Appendix B – Glossary of Terms

### **Asset option**

An asset option is a means of satisfying service needs with investment in existing assets or the creation of new assets.

### **Asset Strategy**

Sets the direction and communicates up-front the assumptions and decisions about the levels of service and who provides them.

### **Assets**

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

### **Base case**

The base case is a realistic option that involves the minimum expenditure to sustain existing standards of service delivery or to achieve previously agreed service standards. Therefore, the base case does not always mean 'do nothing'; rather it is the minimum essential expenditure option (e.g. rehabilitation, renewal, enhancement, replacement, adaptation, or reconfiguration of assets).

### **Benefit**

An advantage gained by one or more individuals through government investment in information and communication technologies.

### **Benefit Management**

Benefit management is the process of organising and managing such that the benefits expected of the investment are tracked and reported.

### **Benefit Management Plan**

A benefit management plan is the document which identifies the benefits expected to be achieved by a specific investment and specifies the criteria for their achievement and who is responsible for their measurement and achievement.

### **Benefit Report**

A benefit report is status report on each benefit claimed in the benefit management plan. The raw data on the KPI's is entered and the output is reflected in terms of the total benefit achieved at a point in time.

### **Business case**

A document that forms the basis of advice for executive decision-making for an asset investment. It is a documented proposal to meet a clearly established service requirement. It considers alternative solutions, and identifies assumptions, benefits, costs and risks.

### **Business case framing**

The process of deliberation to identify the most feasible approach to establish the case for a project.

### **Capacity building**

Growing ICT capabilities (which may be related to systems, skills or knowledge) through innovation or a flagship approach to project implementation and management.

### **Capital expenditure**

Expenditure involved in the creation or upgrading of assets.

### **Cost**

An expense incurred in the production of outputs.

### **Cost-benefit analysis (CBA)**

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

### **Depreciation**

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

### **Discount rate**

The rate used to calculate the present value of future cash flows. Usually determined on the basis of a weighted average cost of capital used to fund the investment from which the cash flow is expected.

### **Disposal**

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

### **Do nothing option**

Maintaining status quo.

### **Economic cost (or opportunity cost)**

The value of the most valuable of alternative uses.

### **Economic measurable**

Benefits, costs and risks of a project to service users, other public bodies or other individual economic unit which are not quantifiable in dollar terms, but measurable using other indicators.

### **Economic monetary**

Benefits, costs and risks of a project to service users, other public bodies or other individual economic unit which are quantifiable in dollar terms.

### **Financial analysis**

An investment evaluation techniques which is confined to the cash flow implications of alternative options and is undertaken from the perspective of the individual department or agency or government as a whole.

### **Financial monetary**

Benefits, costs and risks of a project which are quantifiable in dollar terms using measures such as NPV.

### **Function point analysis**

Analytical approach to assess the robustness of cost estimates and project development timeframe for software acquisitions. The approach is similar to the building industry developing costings per square of floor space or the road construction industry costing projects by the kilometre. It allows project managers to set a price based on cost per function point, rather than on how much time has been spent on the development. A function point is a unit of measurement that puts a number to the amount of functionality delivered to the users by a software application.

### **Impact**

This may be the cost, benefit or risk (either financial, economic, social, environmental, strategic or capacity building) arising from an investment option.

### **Initial Business Case**

The process and documentation to confirm the strategic rationale for a project, its service needs and high level project solutions.

### **Investment**

The expenditure of funds intended to result in medium to long-term service and/or financial benefits arising from the development and/or use of infrastructure or assets by either the public or private sectors. A single investment proposal may comprise of a number of related investment expenditures addressed to the same service need.

### **Investment evaluation**

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

### **Lifecycle cost**

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

### **Multi-Year Strategy**

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

### **Net Present Value**

The sum of all monetary benefits after discounting less the sum of all monetary costs after discounting.

### **New asset option**

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

### **Non-asset option**

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

### **Optimism bias**

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

### **Options analysis**

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

### **Project lifecycle**

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

### **Proposal**

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

### **Residual value**

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

### **Resources**

Labour, materials and other inputs used to produce outputs.

## **Risk**

The extent of variability in, or of exposure to loss in, the expected benefits or returns from an investment. Investment risk is related to the probability of realising fewer benefits than expected.

### **Risk vs uncertainty**

Risk relates to an event where the probability of it happening can be estimated. Uncertainty relates to an event where the probability of it happening can at best be estimated within a range.

### **Scenario analysis**

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

### **Social benefit**

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

### **Social cost**

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

### **Social measurable**

Benefits, costs and risks of a project to society as a whole (ie. externalities) that are not quantifiable in dollar terms, but measurable using other indicators.

### **Strategic assessment**

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

### **Strategic objectives**

Objectives of a project arising from specific government ICT policy objectives (e.g. Putting People at the Centre), or an agency's strategic or priority ICT programs.

## **TEI**

Total Estimated Investment. This only includes the asset component of an investment.

## **Value management**

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

## **Weighting and Scoring**

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

## Appendix C – Scaling the business case to a particular investment

**Table 3** Scope requirements

Business Case Element	High-risk / High cost	Low risk / Low cost
Executive summary	Mandatory Listing of major supporting documentation provided Copies of critical documentation (or summaries) attached to business case	Mandatory Listing of major supporting documentation provided
Project Objectives and Scope	Clearly and succinctly documented and prioritised Relevant KPIs and value measurement approaches and data sources identified and documented	Clearly and succinctly documented and prioritised Relevant KPIs identified
The Investment Logic	Mandatory for Major Projects (see the Major Project Reporting Policy) and centrally funded projects	Recommended for all other projects
Description of Service Needs	Service drivers and project type clearly defined Documentation of level of service to be established and alignment with government and departmental policy and strategic direction Extent to which core benefits from project contribute to meeting service needs is clearly articulated Significant effort undertaken to confirm, quantify and prioritise needs Major stakeholders consulted on needs and priorities Present level of performance in addressing present and future need fully evaluated Process documented in business case	Service drivers and project type clearly defined Needs identified through departmental strategic documentation (service strategy, service plan and Asset Strategy) Present, required and known emerging level of performance evaluated
Stakeholders Identification	Stakeholder mapping and segmentation undertaken Communication strategy developed Stakeholders involved in development of business case Greater research into potential cross-organisational issues and flow-on costs and benefits undertaken Stakeholder issues/constraints/support fully documented and impacts analysed Business case provides detailed information and documents process taken to identify cross-organisational issues	Interviews of key stakeholder representatives Stakeholders advised on a well-informed 'as required' basis
Summary of Options	Collaboration of stakeholders in options analysis Wider range of options considered and refined for in-depth analysis	Most feasible options considered including 'do nothing' / minimal approach Non-asset solutions considered



Business Case Element	High-risk / High cost	Low risk / Low cost
	<p>'Do nothing'/minimal approach considered</p> <p>Significant investment in evaluating non-asset solutions</p> <p>Significant detailed supporting studies</p> <p>Complex scenario/sensitivity analysis undertaken</p> <p>Value management studies undertaken including consideration of capacity for design variations and opportunities for joined-up government</p> <p>Business case documents options analysis in detail</p>	<p>Limited supporting material / feasibility studies may only be required</p> <p>Evidence of compliance with best practice ICT principles</p> <p>Results documented in business case</p>
Critical Assumptions and Constraints	<p>Constraints identified through detailed studies or consultation</p> <p>Assumptions firmed up through detailed studies/analysis</p> <p>Critical assumptions and constraints documented and input to scenario/sensitivity analyses</p>	<p>Desktop evaluation and documentation of assumptions and constraints (based on existing studies / knowledge)</p>
Social and Environmental Analysis	<p>Detailed impact assessments and peer-reviewed expert reports</p> <p>Market research/community consultation undertaken</p> <p>Process and results documented in business case</p>	<p>Preliminary studies or desktop evaluation undertaken</p> <p>Results summarised in business case</p>
Economic and Financial Analysis	<p>External review of inputs and outputs</p> <p>Economic benefits quantified in monetary or measurable terms</p> <p>Optimism bias addressed (risk-based costing)</p> <p>Complex financial/economic modelling</p> <p>Complex scenario/sensitivity analysis</p> <p>Whole-of-life costing</p> <p>Presentation includes pessimistic, most likely, optimistic cases</p> <p>Mapping and scoring of major impacts, and ranking of options using eGovernment Investment Evaluation Framework</p> <p>Detailed risk assessment of options, including qualitative and quantitative approaches</p> <p>Stakeholder collaboration in cost benefit analysis of options</p>	<p>Desktop assessment</p> <p>Simple net present value (NPV) analysis</p> <p>Sensitivity analysis consists of simple 'what if' analysis</p> <p>Whole-of-life costing</p> <p>Presentation of most likely scenario in business case</p> <p>Major benefit types, relevant KPIs and value measurement approaches documented.</p> <p>Mapping and scoring of major impacts, and ranking of options using eGovernment Investment Evaluation Framework</p>
Risk Analysis and Management	<p>Full assessment of all risks for preferred option</p> <p>Stakeholder involvement in risk assessment and management</p> <p>Worst case scenario considered</p> <p>Project risk management processes documented</p> <p>Pilot / modular / incremental approaches</p>	<p>Simple qualitative assessment documented in business case</p> <p>Responsibility for management of major risks (and who bears risk) documented</p> <p>Mitigation strategy for major risks</p>

Business Case Element	High-risk / High cost	Low risk / Low cost
	<p>considered as risk reduction strategies</p> <p>Risk management strategies and contingency planning approaches documented</p> <p>Business case fully details risk management issues and highlights major risks and potential impacts on various stakeholders</p>	
Procurement strategy	<p>Wider range of options considered, including internal build, off-the-shelf acquisition, or custom built by third party.</p> <p>Analysis of short listed options and recommended strategy included in business case</p>	<p>Limited range of options considered</p> <p>Preferred option and reasons documented</p>
Budget Analysis and Funding Strategy	<p>Capital, recurrent and cash flow budget impacts and funding sources documented</p> <p>Full lifecycle impacts highlighted</p>	<p>Capital and recurrent budget impacts documented</p>
Public interest issues	<p>Issues determined from consultation or market research</p> <p>Public interest issues documented and key issues highlighted</p>	<p>Key public interest issues highlighted</p>
Implementation and Timing	<p>Detailed implementation program and specific milestones provided including resource allocation</p> <p>Pessimistic, most likely optimistic scenarios documented</p> <p>Critical path activities highlighted, including risk management strategies</p> <p>Stakeholder communication strategy fully documented</p>	<p>Basic implementation program and milestones documented</p> <p>Basic information provided on communication / consultation strategy to progress project</p>
Recommendation of Preferred Option	<p>Greater robustness in testing of preferred recommendations</p> <p>Recommendation and reasons including processes for testing validity of recommendations documented</p>	<p>Preferred recommendation and reasons documented</p>
Sign-off	<p>Sign-off by CEO and CFO</p>	<p>Sign-off by delegated senior management</p>

## Appendix D – Benefit Classification Model

Figure 3 Outcomes Benefit Categories and Benefit Types

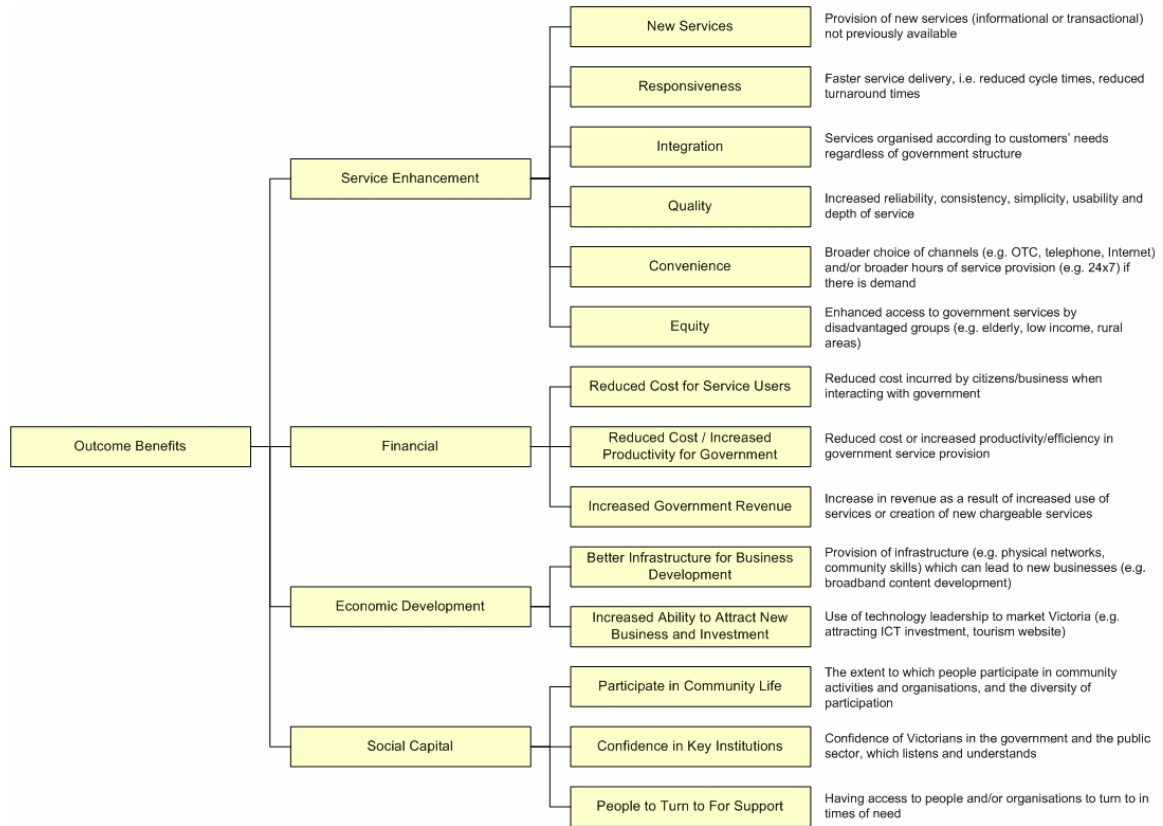
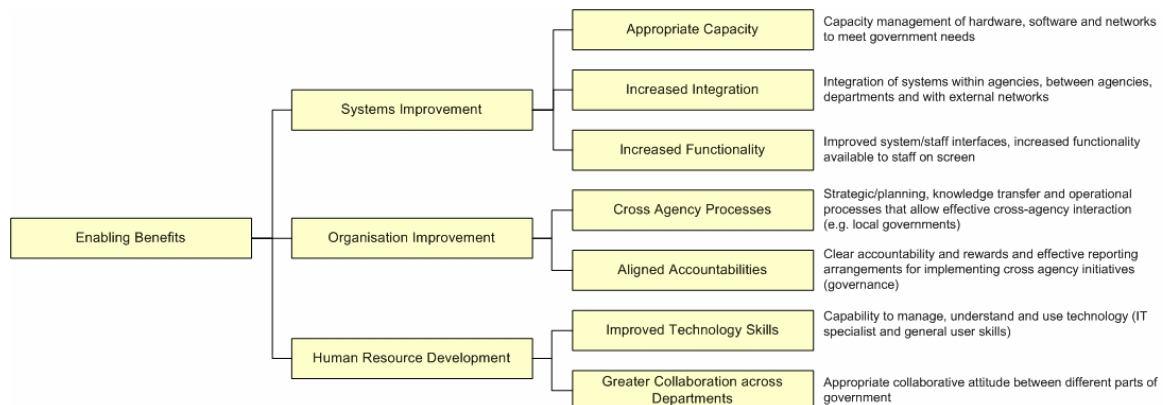


Figure 4 Enabling Benefit Categories and Benefit Types



## Appendix E – Investment Evaluation Matrix

This section presents the *Investment Evaluation Matrix*, an MS Excel template for the evaluation of ICT project options which takes into account the full range of monetary and measurable impacts identified for each option. The matrix, in effect, integrates the findings of the social, environmental, economic and financial analysis for each option to identify the proposal that presents the best overall response to meeting the service needs. The matrix is built on the same overall ‘multivariate analysis’ approach adopted in the IEPG in the integration of impacts of an initiative, but includes the following features that are appropriate for ICT projects:

- Adoption of a “benefits schedule” to document and map the social, environmental, economic and financial benefits arising from ICT initiatives. These should be taken directly from the Investment Logic Map.
- Inclusion, in the evaluation criteria, the rating of a project’s achievement of government or agency/departmental ICT strategic objectives, and ‘capacity building’ objectives.
- Inclusion of a risk adjustment thus permitting a more representative evaluation of project delivery options.

The template is available at the Office of the CIO website.

### Steps in applying the Investment Evaluation Matrix

The following outlines the specific steps in applying the *Investment Evaluation Matrix* (see the MS Excel template).

#### **STEP 1: Define Options – Summary worksheet**

The first task is to input the project name along with the identifier for each of the options being considered in the Cover Sheet of the template. The template allows for the evaluation of up to 4 options (including the base case).

#### **STEP 2: Mapping Benefits – Benefits Schedule worksheet**

The Benefits Schedule worksheet allows for the:

- mapping of different benefits previously identified through the Investment Logic Map to appropriate benefit types from the Benefit Classification Model. This allows for identification of the most appropriate benefit evaluation methods in the options analysis. **Please note that each benefit identified in the Investment Logic Map may have multiple Benefit Types that can attribute to.**
- selection of the most relevant criterion (monetary or measurable) for the evaluation of each benefit. This will have become evident through the investment logic mapping process. There are 7 evaluation criteria covering the full range of financial, economic, social and environmental aspects of an investment. Table 4 provides generic guidance on the application of each criterion.

The Benefits Schedule allows up to 5 individual benefits within each benefit type. In practice, it is not expected that a benefit will be identified for each grouping in the Benefits Schedule, and indeed the Benefit Management Standard recommends that the number of benefits expected from any size project be restricted to 6.

The entry of a benefit in a category results in that category being 'highlighted' in the Weighting Schedule and each Options worksheets in the model, as illustrated in Figure 5.

**Table 4      Generic criteria guidance**

Criterion	Type	Examples of application
Financial	Monetary	Used to assess benefits, costs and risks of project to government that are quantifiable in dollar terms using measures such as NPV.
Economic	Monetary	Used to assess benefits, costs and risks of project to service users, other public bodies or other individual economic unit that are quantifiable in dollar terms using measures such as economic BCR.
Economic	Measurable	Used to assess benefits, costs and risks of project to service users, other public bodies or other individual economic unit that are not quantifiable in dollar terms, but measurable using other indicators.
Social	Measurable	Used to assess benefits, costs and risks of project to society as a whole that are not quantifiable in dollar terms, but measurable using other indicators.
Environmental	Measurable	Used to assess benefits, costs and risks of project to the environment that are not quantifiable in dollar terms, but measurable using other indicators.
Strategic objectives	Measurable	Used where benefits directly contribute to achievement of specific government ICT policy objectives (e.g. Putting People at the Centre) or an agency's strategic ICT programs (e.g. programs established in the corporate plan).
Capacity building	Measurable	Used where projects can clearly demonstrate innovation or a flagship approach to growing ICT capabilities.

**Figure 5 Mapping of Benefits to Evaluation Criteria (Sample Data)<sup>2</sup>**

Value Layers/Benefit Categories/Benefit Types			EVALUATION CRITERIA							
			Measurable		Measurable			Strategic Objectives	Capacity Building	
Financial	Economic	Economic	Social	Environmental						
Outcome Benefits	Service Enhancement	New Services								
		Responsiveness								
		Integration								
		Quality								
		Convenience								
	Financial	Equity								
		Reduced Cost for Service User								
		Reduced Cost/Increased Productivity for Govt								
	Economic Development	Increased Govt Revenue								
		Better Infrastructure for Business Development								
Social Capital	Increased Ability to Attract new Business and Investment									
	Participate in Community Life									
	Confidence in Key Institutions									
Enabling Benefits	Systems Improvement	People to turn to for Support								
		Appropriate Capacity								
		Increased Integration								
	Organisation Improvement	Increased Functionality								
		Cross-Agency Processes								
	Human Resource Development	Aligned Accountabilities								
Improved Technology Skills										
Greater Collaboration across Departments										
Criteria Totals			OK	0%	0%	0%	0%	0%		
Criteria Weights				0%	15%	20%	0%	20%	25%	20%

**STEP 3: Establish Weightings – Weightings Schedule worksheet**

Project owners will need to assign weightings to reflect the relative importance of the evaluation criteria that will guide the options analysis.

This is performed in two stages in the Weightings Schedule worksheet:

- In rows 58–64, insert the proposed weights (in percentage) for financial, economic, social, environmental, strategic and capacity building criteria which would be used to assess options. The assigned weights across the relevant evaluation criteria must total 100%. An example is provided in Figure 5 for illustration.
- In the cell area R12:V39, assign weights (going down the columns) to identify the relative importance of benefit types which correspond to each measurable evaluation criteria. This process enables an initiative owner to highlight those benefits which may be deemed to be of greater (or lesser) importance to a project compared to other benefits. An example is provided in Figure 6 for illustration. Total assigned weights must equal 100% and are used to establish weighted raw scores in Step 4. Note that this process is not performed for benefits being mapped to the financial or economic monetary evaluation criteria, as the financial or economic benefits would be evaluated using a single monetary measure.

The assigned weightings will apply equally for all options. In deciding whether a valid set of weights can be devised, the key test is whether the investment evaluation analyst is capable of providing and reporting a reasoned explanation of the proposed weights that are consistent with the priorities of government, department or agency. Where relevant, the project manager may consider using the primary stakeholders to assist in the determination of the weightings.

<sup>2</sup> Adapted from the “Benefits Realisation Framework” (2002) for eGovernment projects developed for Multimedia Victoria.

To mitigate potential bias, the determination of a relative weighting should be treated as a separate and prior exercise to that of measuring or describing the impact. Refer to Section 7.2 of IEPG for further guidance on this process.

**Figure 6 Evaluation Criteria Weights (Sample Data)**

Evaluation Criteria Weights	
Monetary (Financial)	0%
Monetary (Economic)	15%
Measurable (Economic)	20%
Measurable (Social)	0%
Measurable (Environmental)	20%
Achievement of Strategic Objective	25%
Capacity Building	20%
<b>Total Weights</b>	<b>100%</b>

**Figure 7 Adding Weightings to Benefit Types (Sample Data)**

Value Layers/Benefit Categories/Benefit Types			EVALUATION CRITERIA					
			\$ Monetary		Measurable			Strategic Objectives
Financial	Economic	Economic	Social	Environmental				
Outcome Benefits	Service Enhancement	New Services			50%			
		Responsiveness					75%	
		Integration						
		Quality						
		Convenience					25%	
				50%				
	Financial	Reduced Cost for Service User						
		Reduced Cost/Increased Productivity for Govt						
	Economic Development	Better Infrastructure for Business Development						
		Increased Ability to Attract new Business and Investment						
Social Capital	Participate in Community Life							
	Confidence in Key Institutions							
	People to turn to for Support							
Enabling Benefits	Systems Improvement	Appropriate Capacity						
		Increased Integration						
		Increased Functionality						
	Organisation Improvement	Cross-Agency Processes		60%				
		Aligned Accountability		20%				
	Human Resource Development	Improved Technology Skills		20%				
	Greater Collaboration across Departments							
Criteria Totals			OK	100%	100%	0%	100%	0%

To provide a basis for comparison of options, it is necessary to score the level of contribution of each option towards the evaluation criteria using each Options worksheet. This involves assigning raw scores for each impact under the financial, economic, social, environmental, strategic and capability building criteria using the following rating scale as recommended in the IEPG.

**Table 5 Basis for ratings**

Very much worse (than the base case)	- 4
Much worse (than the base case)	- 3
Moderately worse (than the base case)	- 2
Little worse (than the base case)	- 1
No change (on the base case)	0
Little better (than the base case)	+ 1
Moderately better (than the base case)	+ 2
Much better (than the base case)	+ 3
Very much better (than the base case)	+ 4

The scoring of impacts requires a consideration of the following:

- The scoring and weighting of impacts allow non-monetary (measurable) considerations to be compared with monetary impacts.
- The base case should be regarded as the minimum requirement, with the assessment being determined on the variation (positive or negative) from this base. In cases where the base case carries a positive or negative financial, economic or social impact, this is set as nil, given that the assessment of Options 2, 3 and 4 is done on an incremental basis from the base case.

It will be necessary to convert the financial and quantifiable economic impacts (arising from the financial and economic analyses in Section 2.2.8) to a score on a scale common with that used above. This is completed by allocating incremental dollar ranges to each of the scales in cell area P47:Q55 in the Weighting Schedule, with the range depending on the size of the individual projects. For example, a project expected to generate an incremental financial NPV of up to \$1.5 million and economic BCR of 30 times over the base case may be assigned the following scales.

**Figure 8 Basis for Ratings 1 (Sample Data)**

<b>Basis for Ratings:</b>			
Very much worse (than the base case)	-4	-2000	-40
Much worse (than the base case)	-3	-1500	-30
Moderately worse (than the base case)	-2	-1000	-20
Little worse (than the base case)	-1	500	-10
No change	0	0	0
Little better (than the base case)	+1	500	10
Moderately better (than the base case)	+2	1000	20
Much better (than the base case)	+3	1500	30
Very much better (than the base case)	+4	2000	40

As another illustration, for a project expected to generate an incremental financial NPV of up to \$50 million and net economic benefit of \$95 million over the base case, the following scales may be applied:

**Figure 9 Basis for Ratings 2 (Sample Data)**

<b>Basis for Ratings:</b>			
Very much worse (than the base case)	-4	-60	-100
Much worse (than the base case)	-3	-45	-75
Moderately worse (than the base case)	-2	-30	-50
Little worse (than the base case)	-1	-15	-25
No change	0	0	0
Little better (than the base case)	+1	15	25
Moderately better (than the base case)	+2	30	50
Much better (than the base case)	+3	45	75
Very much better (than the base case)	+4	60	100



**STEP 4: Assign Scores for Each Option – Each Option worksheet**

Once the financial and economic rating scales have been assigned in the Weighting Schedule, the actual incremental financial and economic outcomes for each option over the Base Case, are to be entered in the Raw NPV and BCR cells in each Option worksheet, using a measurement unit consistent with the rating scales (e.g. millions or thousands etc).

The use of Key Performance Indicators (KPIs) can assist the assessment of the scale of measurable economic, social and environmental impacts. These KPIs may already be identified if a Benefit Management Plan has been completed for the project. This process requires project owners to:

- identify required performance indicators and target values for each KPI; and
- translate each indicator into scores using the recommended rating scale.

The scoring of measurable economic, social, environmental, strategic and capacity impacts of each option may be derived based on subjective evaluation, assessment against specified objectives or consideration of expected range of capacity increases.

**Figure 10 Assigning Scores (Sample Data)**

Value Layer/Benefit Categories/Benefit Types			EVALUATION CRITERIA							
Outcome Benefits	Service Enhancement	New Services Responsiveness Integration Quality Convenience Equity	\$ Monetary		Measurable		Strategic Objectives	Capacity Building		
			Financial	Economic	Economic	Social			Environmental	
Outcome Benefits	Service Enhancement	New Services Responsiveness Integration Quality Convenience Equity				4				
								3		
									1	
	Financial	Reduced Cost for Service User Reduced Cost/Increased Productivity for Govt Increased Govt Revenue								
	Economic Development	Better infrastructure for Business Development Increased Ability to Attract new Business and Investment								
Social Capital	Participate in Community Life Confidence in Key Institutions People to turn to for Support									
Enabling Benefits	Systems Improvement	Appropriate Capacity Increased Integration Increased Functionality								
	Organization Improvement	Cross-Agency Processes Aligned Accountabilities				2				
						1				
	Human Resource Development	Improved Technology Skills Greater Collaboration across Departments				2				
<b>Raw NPV / BCR</b>			40	80						
<b>Total Raw Score</b>			1.0	5.0	5.0	2.0	0.0	4.0	0.0	
<b>Total Weighted Raw Score</b>			1.0	5.0	1.8	1.0	0.0	2.5	0.0	

The completion of Step 4 for each option will provide a total raw score and total weighted score for each evaluation criteria.

**Figure 11 Raw Score and Weighted Score (Sample Data)**

Risk Adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total NPV / BCR	40.0	80.0						
Final Rating Score	1.0	5.0	1.8	1.0	0.0	2.5	0.0	
Weighting (by specific criterion)	0%	15%	20%	0%	20%	25%	20%	
Weighted Rating	0.0	0.8	0.4	0.0	0.0	0.6	0.0	
Total Score	1.74							

**STEP 5: Risk Adjustments (if required) – Risk Analysis worksheet**

In considering financial and economic risk impacts of a project, market (systematic) risk is reflected in the discount rate applied to the project cash flows. On the other hand, option-specific risks should be quantified in the option cash flows as appropriate. Risks relating to the measurable economic and social benefits, whilst being more difficult to measure, may be assessed based on estimating the probability/likelihood and impact/consequences of risks. The interaction between probability of risk and its impact defines the level of risk of a particular benefit. A risk scale (such as a high/medium/low scale and weighted criteria) may be used to support the risk analysis. For example, a risk that has high probability of occurring would be estimated to occur 50% of the time. For impact, each risk is assigned a numerical value that represents the percentage amount by which the expected cost or benefit would be impacted if the risk occurred (e.g. cost increase by 15%). These risk ratings work together to calculate the expected value impact of each risk on the initiative (i.e. risk adjustment = 50% x 15% = 7.5%).

The *Investment Evaluation Matrix* allows for risk adjustments to be applied to the scores derived in Step 4, thus permitting a more representative evaluation of project delivery options. For example, risk adjustments may be incorporated in situations where the options differ significantly in the non-monetary risks they bring to the project. The incorporation of risk adjustments is at the discretion of departments and agencies, depending on the nature of individual proposals. Practical determination of the scope of non-monetary risks is necessarily subjective, however, the following approach may be utilised based on the preceding example:

- In the Risk Analysis sheet, list the major types of risks associated with the project options and identify the area most likely to be impacted by the risk (place an X in the appropriate cells. This assists in understanding the scope and nature of risks
- Using the Risk Scale, identify the indicative weightings to be assigned for high/medium/low probabilities and impacts of each risk area.
- For each option, specify the scale of risk probabilities and risk impacts most appropriate for explaining each area of evaluation. Enter the corresponding risk weightings (in absolute % terms) based on the Risk Scale. The risk weightings will automatically feed into each Option worksheet to calculate the risk-adjusted Final Rating Score for each option.
- To the extent that financial and economic monetary risks have not been built into the cash flows of options, the Risk Analysis sheet also allows for the final inclusion of these risk adjustments. These should be entered as the quantified net impact on the expected dollar NPV or economic cost savings should the financial or economic risks occur. Adverse risk impacts should be entered with a negative sign. Again, the adjustments for any monetary risks are at the discretion of departments and agencies.

Figure 12 Risk Assessment (Sample Data)

Type of Risk	AREA IMPACTED BY RISK						Risk Scale		
	\$ Monetary		Measurable			Strategic Objective	Capacity Building	Probability %	Impact %
	Financial	Economic	Economic	Social	Environmental				
Risk 1			X				High	20%	20%
Risk 2				X			Medium	10%	10%
Risk 3						X	Low	5%	5%
Risk 4						X			

**Option 1 : [Option 1]**

Risk Adjustments	Financial monetary	-10.0				
	Economic monetary	25.0				
	Non-monetary - probability (scale) - impact (scale)		High	Medium	Medium	Medium
			Medium	High	Medium	Medium
	Non-monetary - probability (%) - impact (%)		20%	10%	10%	10%
			10%	20%	10%	10%

**STEP 6: Integrated results and preferred option**

The final step is the weighting of each criteria’s Final Rating Score to provide an overall measure of aggregate impacts so that all options can be evaluated on a comparable basis using the Total Score. No action is required as the required inputs are based on the criteria weights previously established in Step 3.

The selection of the preferred option would then be made in a clear and transparent manner based on the analysis of all the elements that go to make up a comprehensive investment evaluation.

Figure 13 Summary of Results (Sample Data)

	SELECTION CRITERIA						Strategic Objectives	Capacity Building	
	\$ Monetary		Measurable			Strategic Objectives			Capacity Building
	Financial	Economic	Economic	Social	Environmental				
<b>Option 1 : 1</b>									
Risk Adjusted Financial / Economic Inputs	30.00	105.00							
Raw Scores	1.00	5.00	5.00	2.00	0.00	4.00	0.00		
Final Rating Score	1.00	5.00	1.76	0.98	0.00	2.48	0.00		
Weighted Rating	0.00	0.75	0.35	0.00	0.00	0.62	0.00		
Total Score	1.72								

## Further Information

For further information:

- Go to <http://www.dtf.vic.gov.au>
- Select Gateway reviews and best practice guidelines
- Select Lifecycle guidance material