ICT Policy Board

ICT investment and decision making framework

Version 1.0, 29 November 2011
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Background

At its 29 November 2011 meeting, the ICT Policy Board endorsed the:

- Tasmanian Government ICT Investment Essential Advice
- ICT Investment and Decision Making Framework (this document)
- Agency ICT strategy and Agency ICT asset management plans template

This Framework supports a consistent coordinated approach to enable the ICT Policy Board to provide quality advice on ICT investments to government that is consistent with the ICT Strategy.
I Building an ICT investment culture

The work of the ICT Policy Board is to advise the Premier on strategic directions for ICT within government, including investment and performance of ICT across government.

The ICT investment and decision making framework is to:

- Guide alignment of ICT investment plans to directly support the ICT strategy and government policy
- Build a culture of strategic asset management for information systems and information technology
- Assist the ICT Policy Board in fulfilling its role, with particular focus on:
  - Providing advice to the Premier regarding strategies, policies, investment and performance for the use of ICT across government
  - Monitoring performance against the ICT Strategy for the use of ICT across government
  - Acting as the program management board for the program of projects to progress the ICT Strategy for the use of ICT across government

The Framework requires:

- Government priorities and policies
- The ICT Strategy
- The ICT Principles
- The ICT Roadmap

And is supported by:

- ICT policies and standards that have been endorsed by the ICT Policy Board
- Common ICT services delivered to agencies
- Knowledge of the current major ICT initiatives, including their broader impacts

The Framework supports and complements the budget process and strategic infrastructure investment review process (SIIRP).

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1 The ICT Strategy and Principles are being developed by the ICT Policy board and will act to set the future direction and priorities for investment in ICT. The drafts are in attachment A1. The ICT Roadmap is to assist and guide in agency ICT planning and implementation, it is outlined in attachment A2.
2 Overview of Framework

The framework has two major components

1. ICT investment & asset planning process - focuses on prioritising ICT investment plans and identifying strategic investments
2. ICT investment budgeting processes - takes the results of the ICT investment and asset planning process into the budget process

The diagram below provides an overview of the two components. The diagram does not illustrate the feedback between each element and the ICT inputs into the process.
Strategic ICT investment & asset planning

- Agency strategic planning and ICT investment & asset planning
- ICT Policy Board review
- Agency ICT strategic plans
- Agency ICT investment & asset proposals
- Agency assessment
- Common ICT requirements
- Agency ICT investment & asset proposals

Agency ICT Reference Group filter

Strategic ICT investment priorities
- Agency ICT investment & asset plans
- Common ICT requirements & identified lead agency

Agency ICT investment & asset plans

Common ICT requirements

Major ICT initiatives

Agency ICT investment & asset plans

Shared or common services

Current major ICT initiatives or projects

Current major ICT initiatives

Government priorities & policies

ICT strategy

ICT "roadmap"

TIs & Common Use Contracts

ICT policies & standards

Shared or common ICT services

Current major ICT initiatives

Input:

Outputs:

Agency ICT investment proposals

Common ICT investment proposals

Agency ICT SIIRP proposals

Common ICT SIIRP proposals

Agency ICT budget proposals

Common ICT budget proposals

Treasury SIIRP assessment

SIIRP funded ICT initiatives

Budget process

Major ICT initiatives

Agency funding review

Agency funded ICT initiatives

ICT Policy Board comments

Key:

ICT Policy Board document

Agency document

Process or review

Current major ICT initiatives or project

Shared or common services
3 Strategic ICT investment & asset planning

Strategic ICT investment and asset planning is the process of:

- Agencies assessing their ICT investment priorities and taking an asset management approach to their major ICT investments
- The ICT Policy Board reviewing agency plans and identifying its strategic ICT investment priorities for Government, including the lead agency for common ICT services.

A common approach to business case summaries and the assessment of proposals is outlined in sections 5 and 6.

3.1 Agency strategic and ICT investment & asset planning

Consistent with the strategic asset management planning processes of Treasury² and Australian accounting standards³, agencies should take a strategic asset management planning approach to guide their ICT investment planning. This should be in the context of the agency ICT strategic plan.

Agency processes should include all sources of funding, all major ICT assets, and include proposals that have no identified funding.

ICT assets of each agency will consist of:

- Tangible assets, such as computer equipment
- Intangible assets, including information and information systems
- ICT services, such as services provided under the Networking Tasmania II contracts

In developing their ICT services, investment and asset plans, agencies should:

- Separate information assets from information systems⁴ and ICT infrastructure
- Consider a variety of sourcing options for information systems and ICT infrastructure
- Assess if any information system requirements are potentially common to the requirements of other agencies
- Classify ICT infrastructure requirements, such as hosting, as common ICT requirements

The output of the agency strategy ICT investment and asset planning process should consist of:

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⁴ Information systems include ICT business applications and computer software
• Agency ICT investment plans
• Agency ICT asset plans
• Common ICT requirements (as identified on the ICT roadmap)

Attachment A3 *DoE business applications solutions strategy* outlines one approach to reviewing existing business applications. Where the review identifies the need for a significant investment, section 5 outlines a common approach to documenting business case summaries for ICT investment plans. Section 6 outlines how the ICT Policy Board will assess ICT investment proposals.

### 3.2 Agency & ICT Policy Board review

Agency strategic ICT plans and ICT investment and asset plans and requirements for common ICT services will be reviewed on a regular basis.

The review will be conducted in two phases, an agency review to determine which proposals and requirements will be of interest to the ICT Policy Board, followed by the ICT Policy Board review.

Each agency review is expected to identify proposals that:

- Have a significant impact on achieving Government priorities and policies
- Have a significant impact on achieving the ICT strategy, including proposals for with an expected life of greater than five years or have impacts or linkages on other agencies
- Will be part of the agency budget funding bid or included in the Strategic Infrastructure Investment Review Process (SIIRP)
- Are for an ICT service that is on the ICT roadmap

The Agency ICT Reference Group will review, prioritise and filter the proposals to draw out strategic proposals for consideration and conformation by the ICT Policy Board.

The Agency ICT Reference Group and individual members will also have a role in-

- Identifying and prioritising common ICT requirements
- Ensuring “below the radar” initiatives, including those not highlighted by the budget process, of agencies are consistent with the broader ICT Strategy
- Identifying “missing” components, requirements or opportunities

These will then be assessed, in consultation with agencies, by the ICT Policy Board to identify:

- Agency ICT initiatives and plans that the ICT Policy Board has assessed to be of strategic interest
- Common ICT requirements, including identification of the lead agency, the ICT Policy Board has assessed to be a priority under the ICT strategy
- Additional strategic elements, requirements or opportunities, including identification of lead agency
Section 5 below documents the information required by the ICT Policy Board and section 6 outlines the criteria the ICT Policy Board will utilise in its review.

The result of the ICT Policy Board’s review will be used to:

- Assist in the budget process (see section 4)
- Identify common ICT requirements that, subject to more detailed assessments, will get ICT Policy Board support
4  ICT investment budgeting

4.1  Agency budget process

Each agency, as part of their budget process, either makes budget bids for specific projects, SIIRP bids or find alternate funding, including Commonwealth and agency funding, for other initiatives.

The outcomes of the ICT Policy Board’s strategic ICT investment and asset planning review will assist agencies in their internal processes.

4.2  Treasury SIIRP assessment

The objective of the Structured Infrastructure Investment Review Process (SIIRP) is to ensure that infrastructure projects funded from the State Budget:

- Appropriately meet the needs of the community
- Have been appropriately scoped and planned
- Are based on reliable and realistic cost estimates.

The effective and efficient management of general government sector infrastructure investment is fundamental in an environment where there are competing demands for Government resources.

The SIIRP will facilitate infrastructure investment decision making by requiring agencies to rigorously evaluate project proposals for infrastructure investment at the earliest stages and review the project proposal throughout the development of the infrastructure.

The SIIRP involves a staged review and assessment process for General Government Sector infrastructure investment proposals.

Treasury, as part of its SIIRP assessment process, will assess the proposal’s relationship to Government policy priorities and other linkages.

The outcome of the ICT Policy Board’s strategic ICT investment and asset planning review will form part of this assessment.

Further information on the SIIRP assessment process can be found at www.treasury.tas.gov.au.

4.3  Budget process

As part of the formal Budget process, the ICT Policy Board will comment on agency bids for project funding.

The outcome of the ICT Policy Board’s strategic ICT investment and asset planning review will form the basis of the ICT Policy Board’s comments.
5 ICT business case summaries

Consistent and succinct business case summaries will assist in each agency’s and ICT Policy Board’s review processes and the ICT Policy Board assessment and commentary on Budget proposals. The proposals may be for a single project, or a program of projects that, coherently, address the identified problem.

The following structure is consistent with Treasury’s SIIRP model:

<table>
<thead>
<tr>
<th>Title</th>
<th>Short title of the proposal</th>
</tr>
</thead>
</table>
| Reason for proposal | • Identify the problem the proposal is to address  
• Outline why the problem needs to be addressed  
• Identify the opportunity and proposed solution and how they will resolve the problem |
| Assumptions | Outline any assumptions made relating to the proposal |
| External conditions (dependencies) | What external conditions or dependencies are critical to this proposal |
| Relationship to Government policy priorities | What Government policies, agency outcomes, and budget output groups supported by the proposal |
| Benefits / outcomes | • Document impact of the proposal on the objectives of the ICT strategy  
• Document high level benefits or outcomes that will be achieved by this proposal, including links to Government policies.  
• Outline how these benefits or outcomes will be measured.  
• Outline expected timeframe to achieve the benefits or outcomes. |
| Risks | • What negative impacts to Government are likely to result from the identified solution, include a summary of agencies that may “lose” by the proposed solution.  
• Identify risks if the proposal is not successful (political, social, economic etc)  
• Summarise the level of risk associated in delivering the proposed solution. |
| Timeframe | Outline expected timeframe to commence and complete the proposal and any constraints on the timeframe. |
| Estimated total cost | Provide estimated capital and recurrent costs for the proposal, over the expected life of the system. |
| Proposed solution | • Do other agencies have a similar business problem or need?  
• Have a range of solutions been explored?  
• Have a range of sourcing options (bespoke, purchase off the shelf, cloud, etc) been explored? |

For Common ICT proposals:

• What is the current situation?  
• Outline assessment of the options of a shared service, common ICT service and common ICT approach  
• Outline major benefits and risks to government  
• Outline major benefits and risks to agencies
### 6 Assessment of ICT investment proposal

The ICT Policy Board will use this criteria as part of the Agency and ICT Policy Board review process and to develop its commentary as part of the Budget process.

#### 6.1 Criteria

Assessments of ICT investment proposals should assess the proposal against:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Government policy</td>
<td>How the investment proposal supports or assists the Government’s key policies, programs, priorities and responsibilities</td>
</tr>
<tr>
<td>2. ICT principles</td>
<td>Is the investment proposal consistent with the ICT Principles.</td>
</tr>
<tr>
<td>3. ICT strategy</td>
<td>How the investment proposal supports the ICT Strategy, through the outcomes of the investment proposal progressing the objectives in the ICT strategy.</td>
</tr>
<tr>
<td>4. Risk and benefits</td>
<td>Level of risk and benefits of the investment proposal, including:</td>
</tr>
<tr>
<td></td>
<td>• The balance of whole-of-government and agency benefits, (financial and non-financial) costs and risks, including potential linkages in other agencies</td>
</tr>
<tr>
<td></td>
<td>• Technical and skills availability risks, including impact of current major ICT initiatives on the proposal</td>
</tr>
<tr>
<td></td>
<td>• Complexity and financial risks</td>
</tr>
<tr>
<td></td>
<td>• Improving efficiency and effectiveness of current ICT versus building capacity and capability</td>
</tr>
<tr>
<td>5. ICT standards</td>
<td>Is the investment:</td>
</tr>
<tr>
<td></td>
<td>• For a common ICT service already provided to government agencies;</td>
</tr>
<tr>
<td></td>
<td>• Identified on the ICT roadmap as a potential common ICT service;</td>
</tr>
<tr>
<td></td>
<td>• Contrary to ICT Policy Board Instructions; or</td>
</tr>
<tr>
<td></td>
<td>• Contrary to ICT Policy Board Essential Advice⁵</td>
</tr>
</tbody>
</table>

Tools and aids such as simple classification standards, the Victorian Investment Management Standard and the Queensland ICT classification framework can assist in identifying outcomes of proposals against Government policy and the ICT Strategy. See the Attachments for further information on these tools.

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⁵ Refer to ICT Policy Board’s Terms of Reference, www.egovernment.tas.gov.au.
6.2 Common ICT proposals and ICT roadmap

Common ICT services are ICT components that are common to many or all agencies. In a number of instances the common elements extend beyond the ICT elements into business operations.

The ICT roadmap will include identification of potential common ICT services. Agency ICT investment and asset proposals should be compared to the roadmap to determine if any elements are for common ICT services.

In addition to the criteria outlined in section 6.1, common ICT proposals require additional assessment to:

- Compare and determine of the appropriate model (see below)
- Identify the lead agency and business owner
- Identify and compare “winners and losers” – proposals for consolidation which have a net benefit to government may have some agencies incurring a net cost, or no benefit.

6.2.1 Common ICT models

For each common ICT proposal the assessment should explore the suitability of a variety of models, summarised in the diagram below:
<table>
<thead>
<tr>
<th>Model</th>
<th>Description &amp; Features</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared service</td>
<td>Shared delivery of a business function or service for multiple agencies, building on common repeatable business processes, practices and transactions.</td>
<td>Service Tasmania</td>
</tr>
<tr>
<td></td>
<td>Necessitates/results in:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Shared and common business processes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Shared and common business practices</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Shared, common and transferable skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Shared and common information standards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Shared and common contracts and technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Well developed consultative relationship and service delivery model by purchasers (agencies) and provider (eg TMD)</td>
<td></td>
</tr>
<tr>
<td>Shared ICT service</td>
<td>Shared delivery of an ICT service for multiple agencies, building on common repeatable transactions.</td>
<td>Government email service</td>
</tr>
<tr>
<td></td>
<td>Necessitates/results in:</td>
<td>Networking Tasmania</td>
</tr>
<tr>
<td></td>
<td>• Shared and common business processes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Shared and common skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Shared and common information standards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Shared and common contracts and technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Well developed consultative service delivery and contract management model by purchasers (agencies) and provider (eg TMD)</td>
<td></td>
</tr>
<tr>
<td>Common ICT approach</td>
<td>Agency implemented approach utilising some common or shared elements.</td>
<td>Empower, TechnologyOne</td>
</tr>
<tr>
<td></td>
<td>May result in:</td>
<td>Financials</td>
</tr>
<tr>
<td></td>
<td>• Common or shared skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Common or shared information standards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Common or shared contracts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Common or shared technologies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Common or shared hosting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Consultative contract management model by purchasers (agencies) and provider</td>
<td></td>
</tr>
</tbody>
</table>

Factors that will impact on the selection include:

- The ability to standardise on repeatable business practices, business processes and transactions across agencies
• The level of business and technology maturity in government and the wider industry
• The level of commoditisation of the technology
• The level of net benefit and risks to government versus the costs, risks and benefits for each individual agency

Consolidation proposals should clearly address the above issues.

Implementation details of each of the three models above will be addressed as part of the ICT roadmap.
Attachments

A1 Draft ICT Strategy and Principles
A1.1 Vision – for the Tasmanian Government's use of ICT

The Tasmanian community will benefit from improved and transformed service delivery, greater public sector productivity and informed decision making, which will be enabled by ICT resources that are forward-looking, adaptable and that are effectively managed across the public sector.

A1.2 Objectives

This vision will be progressed through a commitment to the objectives of;

1. **Improved productivity in the public sector through investment in ICT**

   The strategic and efficient investment in ICT to reduce costs, to ensure the realisation of whole-of-government benefits and the efficient use of resources, to encourage capacity building across government, and to ensure the ongoing management of information assets and associated risks.

2. **Improved and transformed service delivery, that is more client centric and more integrated across government, through ICT**

   ICT will be used to transform government service delivery and ensure better services for clients, to ensure a citizen-centric focus and the alignment of services across portfolios, encouraging the sharing of information and the integration of service delivery channels.

3. **Better access to information for the community, business and public sector employees**

   The progression of open government, to ensure the sharing and access to government information (ie Government 2.0) and encouraging online access to government where possible.

4. **Strong leadership, focused investment decisions and effective management of ICT across the public sector**

   The driving of major ICT initiatives, and the provision of clear advice and recommendations on the future directions in ICT, to ensure clarity of expectations and encourage long term investments.

5. **A common approach to the provision of commodity ICT resources**

   To ensure the most effective and efficient provision of those ICT components that are common to many, or all, parts of government.
A1.3 Principles

To meet these objectives, strategies will be developed in accordance with the following principles;

1. Future investment in ICT will
   a) Be consistent with the vision and objectives of the ICT Strategy
   b) Be based on sound and agreed criteria
   c) Require an understanding of the current situation and future needs
   d) Look at the overall benefits, not just at the agency level, but also beyond to whole-of-government implications and opportunities
   e) Require priority investments will to be supported by sound business cases
   f) Build the overall ICT capacity across government and the development of common approaches
   g) Ensure the business risks to government of its investment in ICT are recognised and managed

2. There will be a mixture of whole-of-government and agency provision of ICT such that
   a) Agencies will use common ICT products and services to meet relevant business needs where they are available
   b) Agencies will work with lead agencies providing such common ICT products and services to ensure that they meet business purposes
   c) Agencies providing such common ICT products and services are to ensure that they take into account the business needs of agencies and deliver real benefits to government as a whole
   d) Agency specialist business needs will be addressed by agencies
   e) There will be progressive consolidation of commodity ICT infrastructure (starting with email) for those needs that are common to more than one agency
   f) All ICT investment, whether at whole-of-government or agency level, will promote connectedness and compatibility
   g) Common business processes should utilise common business practices and common supporting ICT
   h) The cost to individual agencies of whole-of-government implementations will be considered
   i) Key information sets will be shared across agencies through the use of standards
   j) Where government is integrating service delivery, the provision of supporting ICT will also be integrated

3. Planning, development, and operation of ICT will
   a) Utilise best practice methodologies for ICT service delivery and project management
   b) Be conducted with a cooperative and flexible approach between agencies to progress common objectives
   c) Be based on what is best for government as a whole
   d) Ensure that investment in ICT is planned, factoring in all total life-cycle costs, and that it is subject to an approval process to ensure alignment with the ICT Strategy
A2 ICT Roadmap

The ICT Roadmap is to assist and guide agencies in implementing whole-of-government and their individual business systems and ICT investments.

The Agency ICT Reference Group will act as Steering Committee for the ICT Roadmap.

The ICT Roadmap will consist of:

- A list of agreed ICT building block components of the Tasmanian Government ICT environment
- An agreed direction for the Tasmanian Government in regards to progressing the components
- A plan and priority for progression for implementation of the ICT Roadmap

This will make it easier for agencies to plan and implement their ICT investments, initiatives and business systems.
A3  DoE business applications solutions strategy

The following approach to reviewing business applications was developed by the Department of Education, utilising a Gartner methodology.

A3.1 Business applications solutions development and support strategy

Business Application Solutions development and support strategy includes the following goals:

- **Administrative workload and integration** – with the aim to reduce time and effort spent maintaining infrastructure and applications, decreasing the administrative burden of staff, school and corporate areas. Where possible, new applications will reuse identity information, finance information, qualifications, etc. It is undesirable that the same information is maintained numerous times, sometimes by different business units. Business applications will integrate with other applications as appropriate.

- **Sustainable business application diversity** – while it may be desirable to support a variety of business applications within DoE to cater for differing business needs, it must be recognised that this has an impact on:
  - License cost (there may be no opportunities for state-wide licensing)
  - Support cost (may necessitate)
  - Profession development (as staff are mobile there may be a retraining effort as they move from business unit to business and encounter different applications.)
  - Staff availability – due to a significant staff ‘churn’ it is desirable to standardise on a number of platform and technologies

It is desirable that diversity is balanced against supportability and cost impacts.

- **Better reuse of identity information** - every DoE staff, student, parent / guardian and client should have a single identity (username and password) that they use during their interactions with DoE. It is desirable that all corporate and e-learning business applications are able to re-use these identities, rather than creating new ones. This also implies that a person (staff, student, parent, etc) identity remains constant as they move from business unit to business unit.

- **Agility** – business applications developed will be responsive to changing political and technical environments, by virtue of exploiting new technologies and design approaches. For many branches, current business applications were built during a time of independent business processes and consequently silos were built with copies of data and with no real connection to each business application. Over time piecemeal integration has lead to even more complex IT infrastructure, with associated support costs. Organizational demands for business process flexibility and adaptability are often difficult in an environment of ‘one purpose’ hardcoded applications. There is a greater expectation for the agency to respond quickly to changing priorities. A fleet of old applications will make this increasingly difficult.

- **Better resource management** - providing a consistent methodology for approval of ICT priorities investment. Taking a strategic approach to ICT investment will make it more likely to provide better forward planning and align:
  - Internal ITS staff resources
  - Business staff resources
Industry vendor availability

- **Application architecture** – using a standards based development approach to support integration and reuse of data. All applications that are bought or built as part of this strategy will be designed to be scalable, highly performing and allow for secure access by staff over the internet. There will also be a significant focus on leveraging of whole of government opportunities for application consolidation / hosting.

**Strategic Direction**

- ITS to review with each of the Business Application owners the business application boundary and its ability to satisfy business requirements.
- ITS to confirm on-going Business Application requirement, or Business Application decommissioning as appropriate with each PSG member for areas within their responsibility.
- ITS utilise a software development and support panel of local companies to enable access to multiple software skill sets.
- DoE wherever possible will purchase rather than build a software business application.

**A3.2 Business Application Status and Review Methodology**

The DoE business application solutions strategy will follow the Gartner methodology of needs identification, essentially as a function of business value and technology risk.

**Definition:** IT portfolio management is a structured approach to categorize, evaluate, prioritize, purchase and manage an organization’s technology assets (hardware, software and human), investments and projects based on current and future economic drivers — and the acceptable balance of value/risk desired by the business.

**Key benefits:**

- Targets IT resources to meet business goals and increases IT and business alignment
- Better IT budget control and management across DoE and improved transparency on IT expenditures

Tolerate those systems that still satisfy a significant portion of the business function and are on platforms that deliver high quality of service.

Integrate those involved in business processes that cross silos or where data volume precludes conversion.

Migrate those systems that are "burning platforms" or that use declining or irreplaceable skills.

Eliminate those that no longer provide significant business value.

A sustainable business application lifecycle planning requires funding to be available for system replacement upon retirement, and assumes that the original business drivers and processes for the business application still apply.
Tolerate

Tolerate those systems that still satisfy a significant portion of the business function and are on platforms that deliver high quality of service.

Criteria:

• Satisfies 80% of the business function
• Platform quality of service required
• Problem is access, not implementation

Strategies:

• Presentation integration
• Code cleanup
• Restructure
• Code analysis / inventory

Integrate (maintain / evolve asset)

Integrate those involved in business processes that cross silos or where data volume precludes conversion.

Criteria:

• New business drivers cross traditional stovepipe applications
• Data volume precludes conversion
E-business needs offered by packaged solution are critical

Strategies:
- Presentation integration
- Programmatic integration
- Business Process Management
- Desktop integration

**Migrate (re-evaluate / reposition asset)**

Migrate those systems that are "burning platforms" or that use declining or irreplaceable skills.

Criteria:
- Burning platform
- Declining and irreplaceable skill sets
- Manageable quality of service expectations
- Resolve merger and acquisition differences

Strategies:
- Business application infrastructure (software and hardware) replacement
- Re-host
- Re-write
- Outsource
- Platform migration

**Eliminate**

Eliminate those that no longer provide significant business value, which requires some agreement on the parameters of business value.

Criteria:
- Low business value
- Duplicate implementations
- Alternate implementations

Strategies:
- Decommission
A4 Investment business cases

Business cases should clearly and simply articulate the problem that is being addressed, the interventions proposed to address the problem, proposed solution and the anticipated benefits.

A variety of tools are available to assist in the development of business cases, including:

- Department of Treasury & Finance (Victoria) – Investment management standard (see A4.1)

  The Victorian Investment Management Standard is one approach to assessing and documenting business cases. The approach includes Investment Logic Map to concisely document business cases and simple checklists to assess the completeness of the business case.

- Productivity Commission, The Dynamics of adoption, adaptation, learning and productivity performance (see A4.2)

  Assessment of likely benefits of ICT investments can be complex, especially where the investment has cross agency benefits. The Productivity Commission’s research paper on ICT use and productivity in Australian firms notes issues to be considered when assessing likely benefits of proposed investments.

- Classification and categorisation of ICT services (see A4.3)

  Classification systems can assist in assessing likely impacts of ICT proposals, including period over which outcomes are likely to be achieved and ongoing support is required, and linking the proposal to government policy objects.

- Investment reviews (see A4.4)

  Investment reviews are to assist in assessing if a project to determine if it is still likely to achieve the desired outcomes. The Gateway model is one such approach.

The above approaches are described in more detail below.
A4.1 Department of Treasury & Finance (Victoria) – Investment management standard

The Investment Management Standard is a collection of simple, common-sense practices that enable an organisation to direct resources to deliver the best outcomes.

The standard has been evolving since 2004 as a response to investment practices that were increasingly complex but failed to focus on the real need for an investment or the benefits that would be delivered.

In the place of complex processes, the standard is centred on two simple concepts:

- two-hour informed discussions that bring together those people with the most knowledge of a subject to create and agree to the 'investment story' and
- the depiction of the agreed investment story (Investment Logic Map) on a single page using language and concepts that can be understood by the lay person.

While the original aim of the standard was to shape and manage individual initiatives, it is now applied to those functions in which organisations make their major investment decisions. For the sake of this standard, 'investment' is defined as 'the commitment of the resources of an organisation with the expectation of receiving a benefit.'

The Standard also includes simple checklists to assist in assessing the quality of business cases.

An example of investment logic map and the investment decision can be found at http://www.dtf.vic.gov.au/CA25713E0002EF43/pages/investment-management-home.

A4.2 Productivity Commission, The Dynamics of adoption, adaptation, learning and productivity performance\(^6\)

The relationships that link ICT use and productivity gains are complex and dynamic, largely because ICT is rapidly-changing, relatively new and provides platforms for a wide range of innovations in a wide range of circumstances. Not only are complementary investments in innovation important in determining performance gains, but learning effects also feed back into decisions on ICT use and on complementary investments.

The Productivity Commission’s research paper on ICT use and productivity in Australian firms notes issues to be considered when assessing likely benefits of proposed investments:

- Direct outcomes resulting from direct utilisation and impacts of the outputs
- Indirect outcomes, including multifactor productivity growth emerging from innovation, new ways of doing business, “spillovers” or other unforseen outcomes
- External risks to achieving the outcomes including-

- Risks arising from delays in realising outcomes by six months to three years after the investment
- Impact of incompatible systems or lack of interoperability of data, information, systems, or processes
- Inability to realise benefits from multiple investments due to “speed limits” on the rate at which new technologies be adopted to achieve optimum outcomes

- Linkages and impacts of ICT investments on-
  - Accumulation of corporate knowledge
  - Human capital
  - Organisational capital or capability
  - Performance effects

Some of the major links are represented schematically in the above diagram.

The solid thick lines show the combination of uptake of ICT and complementary investments leading to productivity gains. The complementary investments depicted cover: R&D (for product innovation, although it could also be directed toward process innovation); education and training for skills formation (to support the use of ICT although, again, it could also support process and organisational change); and process and organisational change.

The thin solid lines represent links to learning. These can be from increased familiarity with ICTs and their capabilities; experience from investing in complementary activities; from the experience of success and failure of investment programs; and the feedback from successes and failures in product markets. Learning from experience can also foster the ability to recognise new opportunities for application of ICT.
The thick dotted line represents the feedback from learning to subsequent ICT and complementary investments. These complementary actions will further lift productivity. And so the process continues.

The diagram also shows links, represented by the thin dashed lines. These capture the fact that use of ICT can influence the efficiency and effectiveness of R&D activity and can provide information that assists process and organisational innovation.

To limit the complexity of the diagram, links to and from other types of capital are not shown.

**A4.3 Classification and categorisation of ICT services**

Classification systems can assist in assessing likely impacts of ICT proposals, including period over which outcomes are likely to be achieved and ongoing support is required, and linking the proposal to government policy objectives.

Three simple approaches are:

- Systems of innovation/differentiation and record
- Running/change the businesses
- Is the investment for a common ICT service (as identified in the ICT roadmap)

Each classification model can assist in identifying:

- Timeframe for assessing return on investment
- Type of outcomes and benefits that should be expected
- How the investment fits within the standards and policy framework

**Figure 1: Systems of Innovation/differentiation/record**

<table>
<thead>
<tr>
<th>Systems of</th>
<th>Characteristics</th>
<th>Likely life span and funding</th>
</tr>
</thead>
</table>
| **Innovation** | Ad-hoc, experimental, custom built, flexible  

_Tendency to support business innovation at the expense of strong standards compliance, may require “work-arounds” to interoperate with other systems._

Under 3 years, either replaced by more permanent system or dropped  
Recurrent funding  

| **Differentiation** | Moderate complexity, configurable, mixed bespoke development, package or “cloud”  

_Often integrate with “systems of record” and so need to adopt existing standards._

3 to 5 years, possibly 10 years  
Mixed funding |
Highly structured, strong standards/controls, repeatable transactions, off the shelf or package solutions

Tend to support core business functions, due to longevity effectively establishes technical, information and other standards

Over 10 years
Capital funding
Included in strategic asset management plans

**Running the business**
Outcomes target price and performance or efficiency and effectiveness measures

**Change the business**
Outcomes include building capacity and capability

The Queensland Government has developed a more complex classification framework (see A4.5 below) which is a useful tool in linking ICT services to Government Policies and priorities.

### A4.4 Investment reviews

There are number of well established investment review models. One of the more mature and better understood approach is the Gateway model. It was initially developed by the United Kingdom’s Office of Government Commerce as the OGC Gateway® Review Process and adopted other organisations, including the Victorian and Commonwealth Governments.

The Gateway model is primarily designed for large and/or risky investments. However, its principles can be applied, in a simplified form, to smaller investments.

The Victorian Gateway Review Process described six Gates where a formal review is held prior to continuing to the next stage as identified below.

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7 Further information can be found at [www.gatewayreview.dtf.vic.gov.au](http://www.gatewayreview.dtf.vic.gov.au) and [www.ogc.gov.uk](http://www.ogc.gov.uk).
The first two reviews are covered by the SIIRP, the budget process and the ICT investment and decision making framework.

The six Gates are appropriate key points to consider for a formal review.