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ICT Guideline

Investment Logic Map

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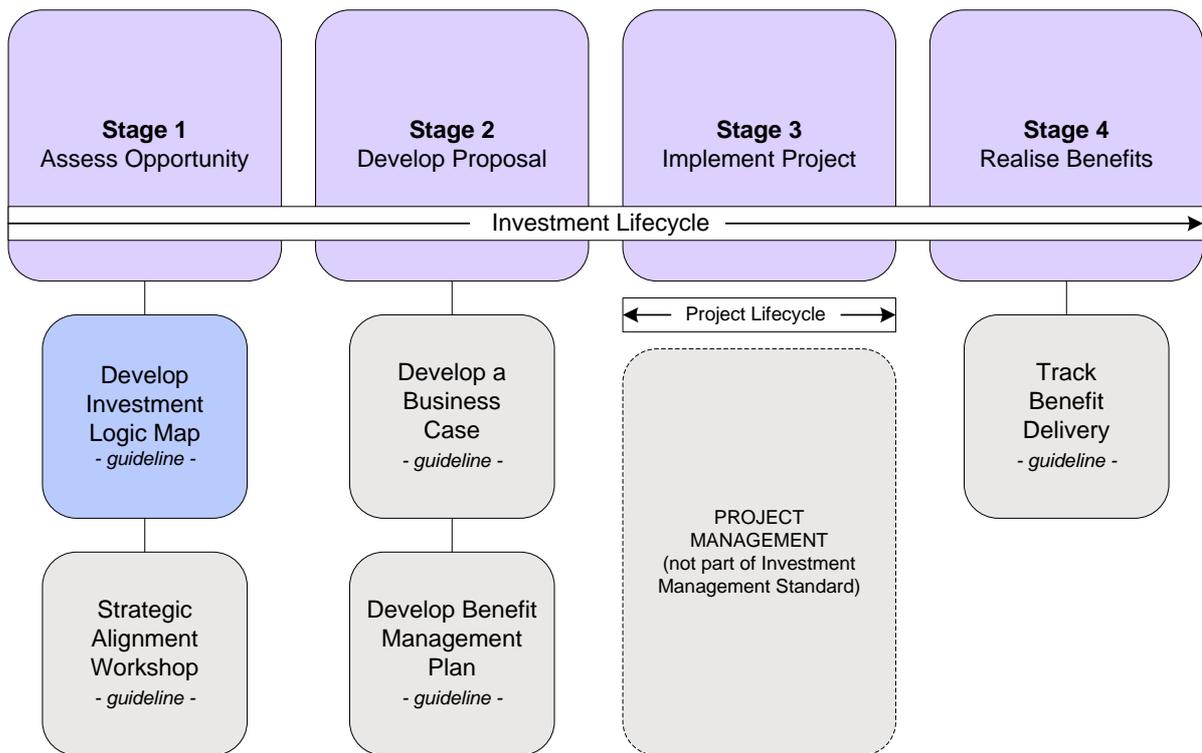
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1 About this guideline

The Victorian Government has developed an Investment Management Standard. Although this originally targeted information communication technology (ICT) related projects, it can add significant value to any type of initiatives and is applicable to any investment.

The investment management process outlined in the Standard involves four separate stages. The development of an Investment Logic Map is required as the first step of the investment management process and is the foundation for the management of the investment through the investment life cycle as indicated in Figure 1.

Figure 1: The Investment Management Process – Develop Investment Logic Map



2 How to create an investment logic map

2.1 Introduction

A facilitated workshop should be conducted, in which the following key components are addressed. With the exception of Enablers, all these components should be worded in non-technical language suited to a business audience. You should consider writing each of the objectives, business changes and enablers as actions: “Need to...Improve the...Undertake a...Develop a...Redress the” because these are the activities that government will undertake. The drivers and benefits respectively cause and flow from those activities.

- **Drivers**

What are the reasons for undertaking this investment? The drivers are external pressures or forces that require a response from government. As they are external, they are not controlled by government. Drivers are often negative (e.g. need to fix something that is broken), but not always (e.g. need to respond to changing market pressures). When defining the drivers, think of the audience for this document – e.g. if you are developing an ERC bid, would the Premier and the Treasurer be concerned about these drivers?

- **Objectives**

The objectives define the government’s response to the external drivers. These are the high level aims/goals/aspirations of the investment. If you achieved these objectives, you have adequately responded to the “threat” or “risk” or “opportunity” posed by the drivers.

- **Benefits**

The benefits are the advantages gained by groups within society of government’s objectives being completed. So, if you achieve an objective, what benefits will flow to either government (enabling benefits) or the Victorian community (outcome benefits). These should be “real” and “measurable”.

- **Business changes**

To achieve any benefits, someone has to do something differently. That *someone* can be either a public servant or a member of the community. The *something* can be any activity that is performed. There are few restrictions on what can be defined as a business change, however, any activity specific to the scoping or implementation of an asset or technological solution should not be treated as a business change – these are enablers.

- **Enablers**

This is the only optional component. While some benefits may be realised following a business change being achieved, some also require additional asset / technological solutions be in place. Enablers include those activities relating to the purchase or implementation of an asset.

As these components are discussed during the facilitated workshop, they should be mapped in a way that identifies the relationships between each component. The resulting investment logic map should depict the investment “on a page”. The drivers should be being identified first and enablers identified last. Mapping this way ensures that business problem drives the solution rather than the other way round. The following figure illustrates the theoretical relationship between the different components of the map and the order of activity. The figure highlights that benefits are only realised at the end of any investment lifecycle.

Figure 1—Investment Logic Map – The Five Components



2.2 Drivers

List the drivers on the left hand side. In the following example there are three drivers.

2.2.1 Ten Examples

- Unsatisfactory financial management
- Emerging threats to security of information
- Unacceptable risk to business continuity
- Duplication of compliance costs
- Growing public frustration over access to services
- Growing number of privacy breaches
- Contract expiration
- Sub-optimal decision making conditions
- Unable to comply with legislation
- Unable to undertake holistic reporting and analysis

Figure 2—Investment Logic Map: Drivers

Driver 1

Driver 2

Driver 3

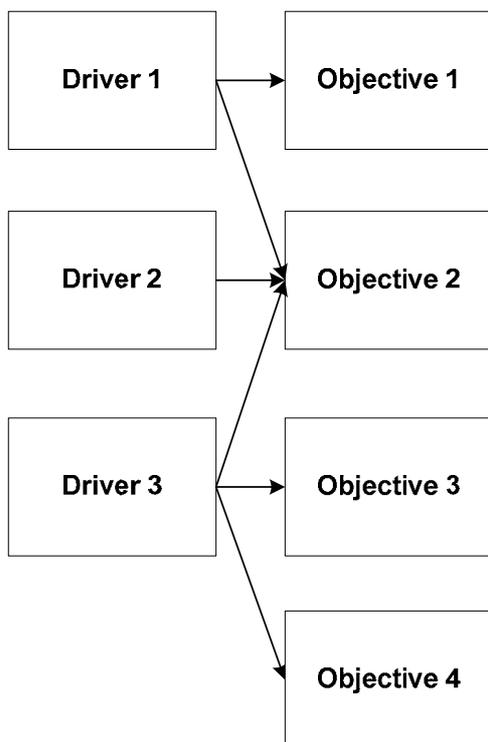
2.3 Objectives

List the objectives to the right of the drivers and link the objectives to the drivers to which they relate. In the following example there are four objectives – some associated with multiple drivers.

2.3.1 Ten Examples

- Better co-ordination across programs and initiatives
- Compliance with national standards
- Provide certainty for current and future service delivery
- Make Victoria a better place to do business
- Maximise opportunity in national and export markets
- Become a national leader in client identity management
- Standardise infrastructure across programs
- Improve performance in identified high risk areas
- Provide authoritative and relevant content
- Improve capability for strategic and tactical investment planning

Figure 3—Investment Logic Map: Objectives



2.4 Benefits

List the benefits to the right of the objectives and link the benefits to the objectives to which they relate. In the following example there are five benefits.

2.4.1 Ten Examples

Better informed decision making

Lower cost of justice

Better value for money

Increased business confidence

A more innovative public service

Minimise the risk of embarrassment to government

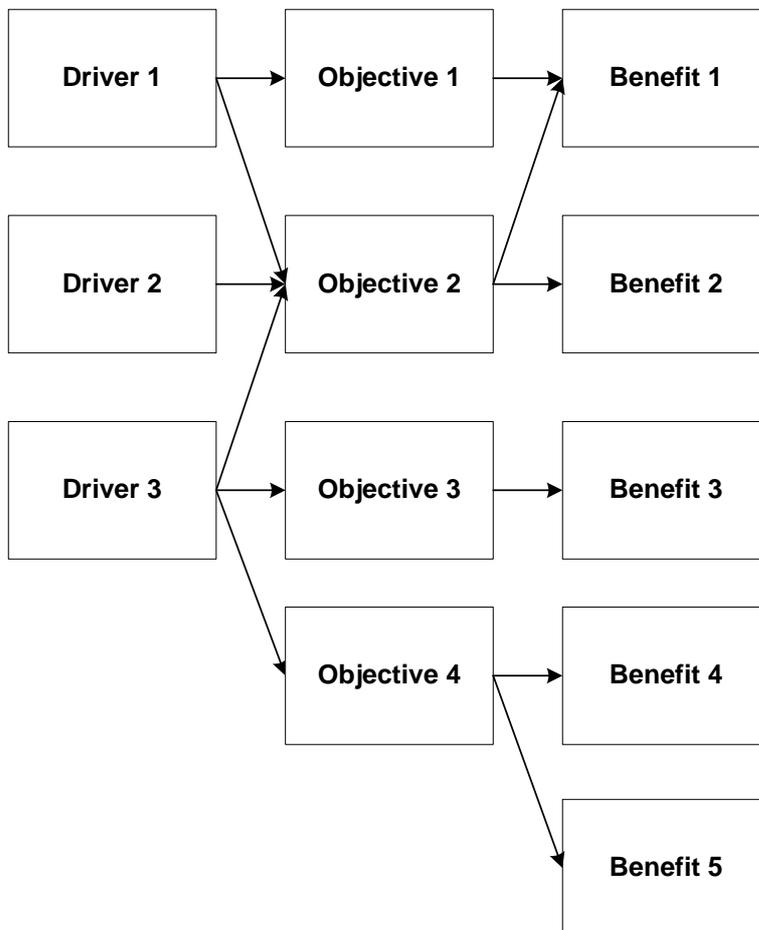
Improved service to business

Reduced cost of procurement

More robust and responsive industry

Increased equality of access

Figure 4—Investment Logic Map: Benefits



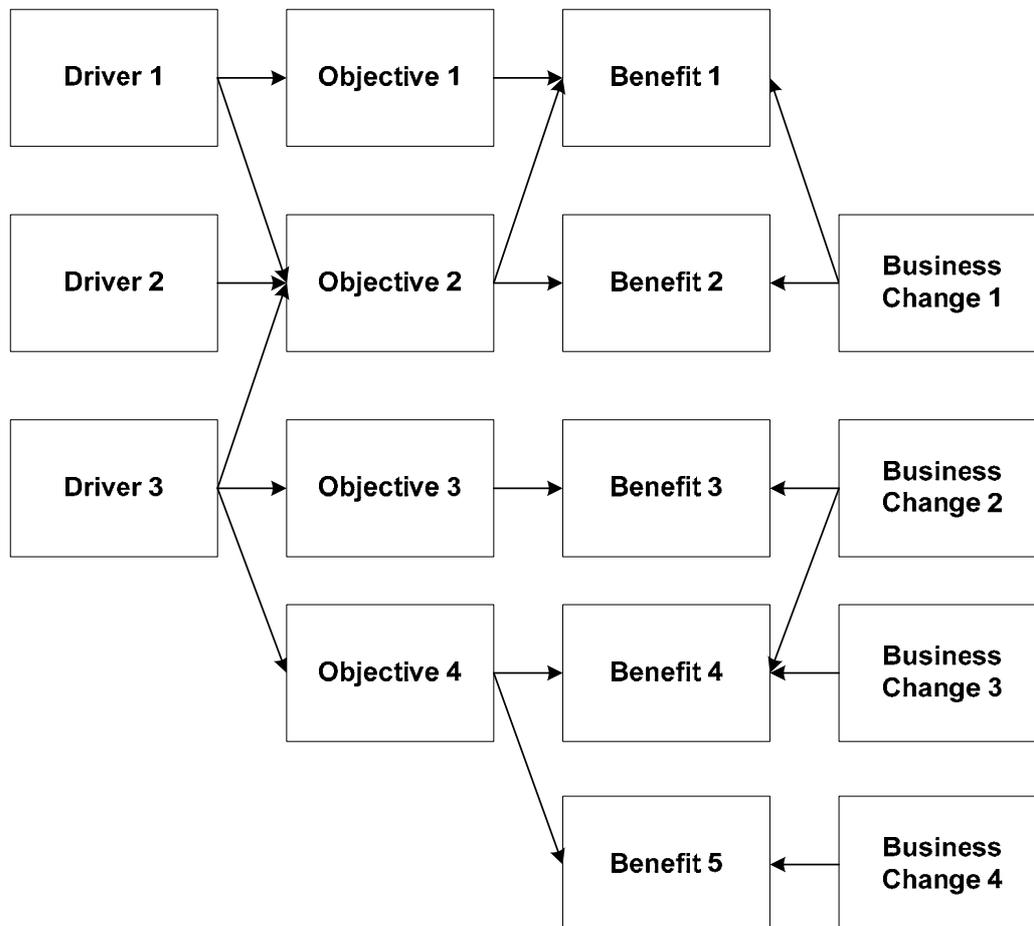
2.5 Business Changes

List the business changes to the right of the benefits and link the business changes to the benefits to which they relate. In the following example there are four business changes.

2.5.1 Ten Examples

- Provision of training to staff
- Realign business processes
- Release new policies and standards
- Implement continuous improvement cycle
- Establish technical support for staff
- Centralise processing of forms
- Apply enhanced analytical approaches and techniques
- Establish required management forum
- Change the organisational culture
- Review engagement processes

Figure 5—Investment Logic Map: Business Changes



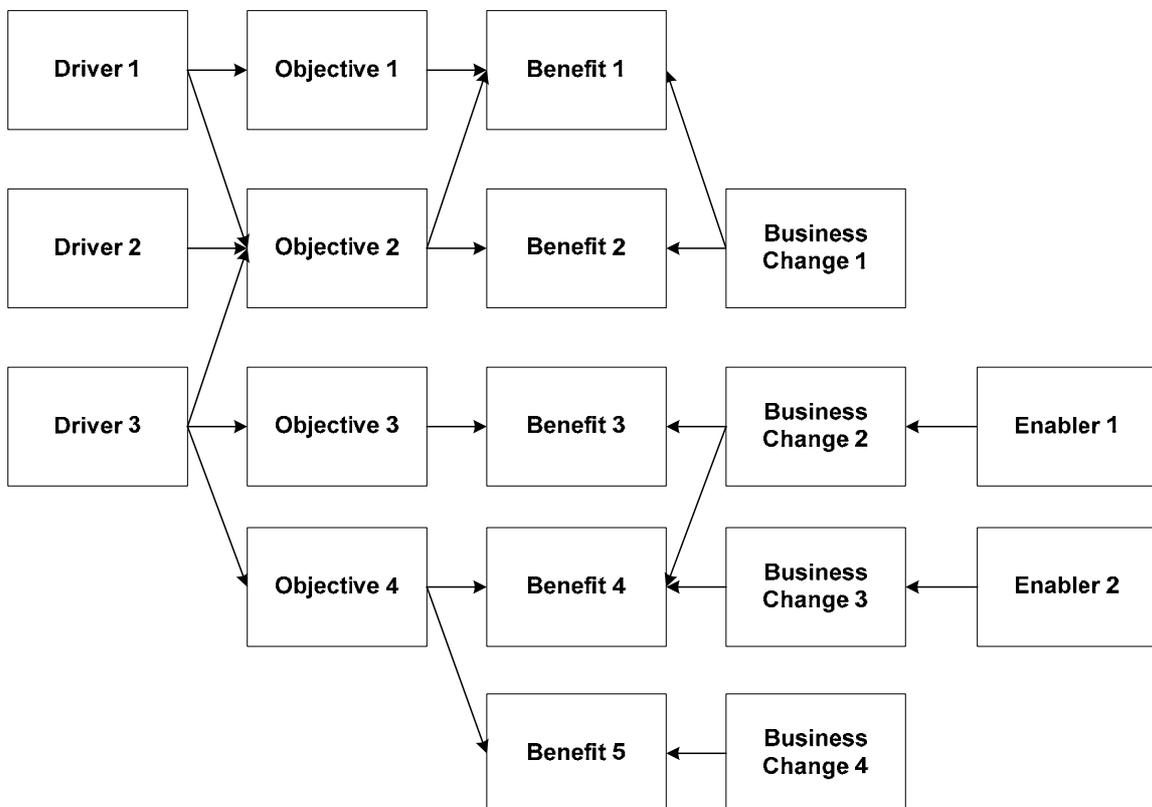
2.6 Enablers

List the enablers to the right of the business changes and link the enablers to the business changes to which they relate. In the following example there are two enablers and the arrows indicate that two of the four business changes do not require enablers in order to take place.

2.6.1 Ten Examples

- Develop website
- Building 20 more class rooms
- Establish data warehouse
- Consolidate network facilities
- Establish access management tools
- Retire existing systems
- Install databases
- Move forms online
- Upgrade application architecture
- Purchase and install computing equipment
- Cleanse and consolidate disparate data sources

Figure 6—Investment Logic Map: IT Enablers



2.7 Weightings

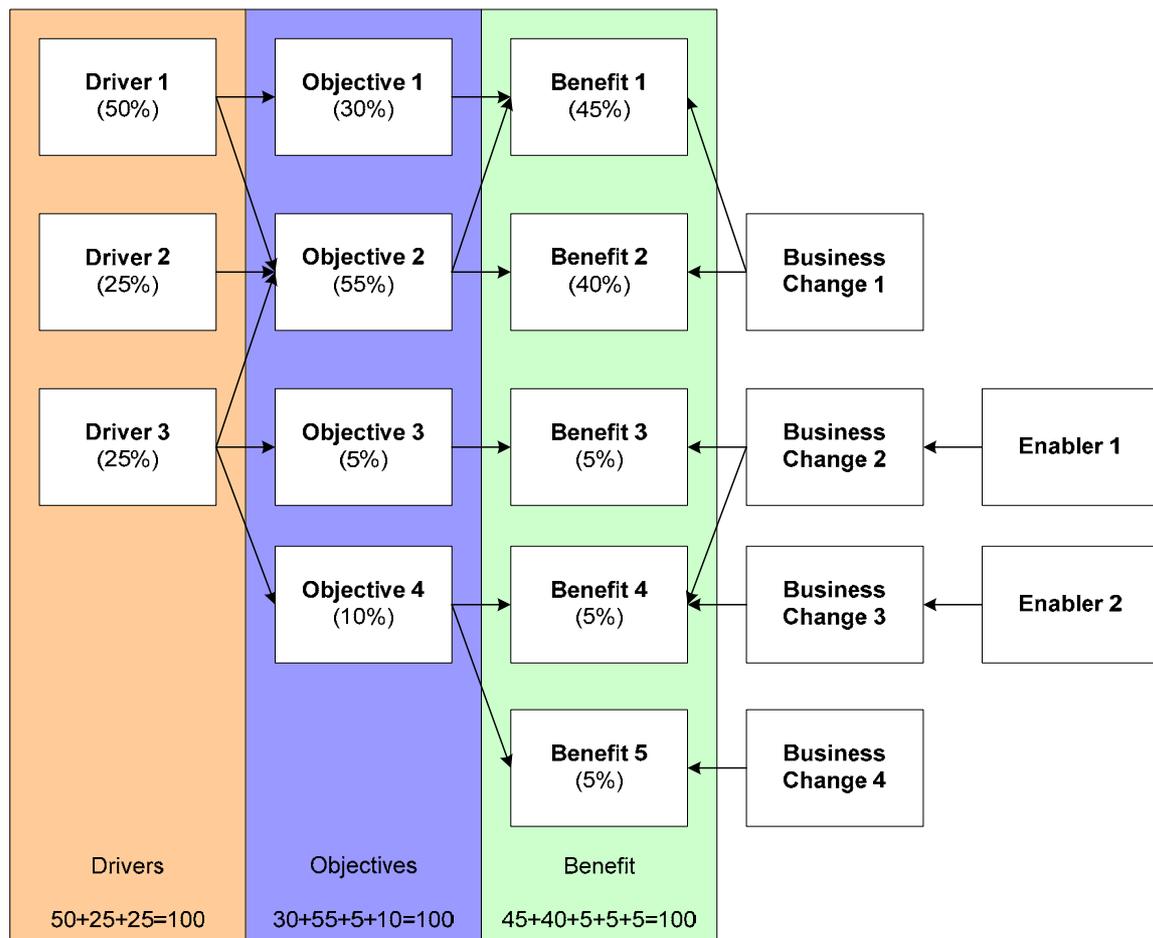
Weighting the benefits enables the following analysis to take place:

- Measuring benefit achievement using KPI's – not all benefits are equal and so this should be considered when providing an assessment of benefit achievement using the benefit report template.
- Assessing resource allocation in light of benefit significance – The allocation of resources to the business changes and the enablers should roughly mirror the significance of the benefits to which they link. This significance is determined through this weighting process. If there appears a large divergence between the resourcing of a set of business changes and enablers and the significance of the resulting benefits, this may be a trigger for re-examining investment priorities.

To apply the weightings, follow these steps:

1. Assign a total of 100% for the driver column.
2. Split each drivers weighting amongst all those objectives to which it is linked.
3. Split each objectives weighting amongst all those benefits to which it is linked.

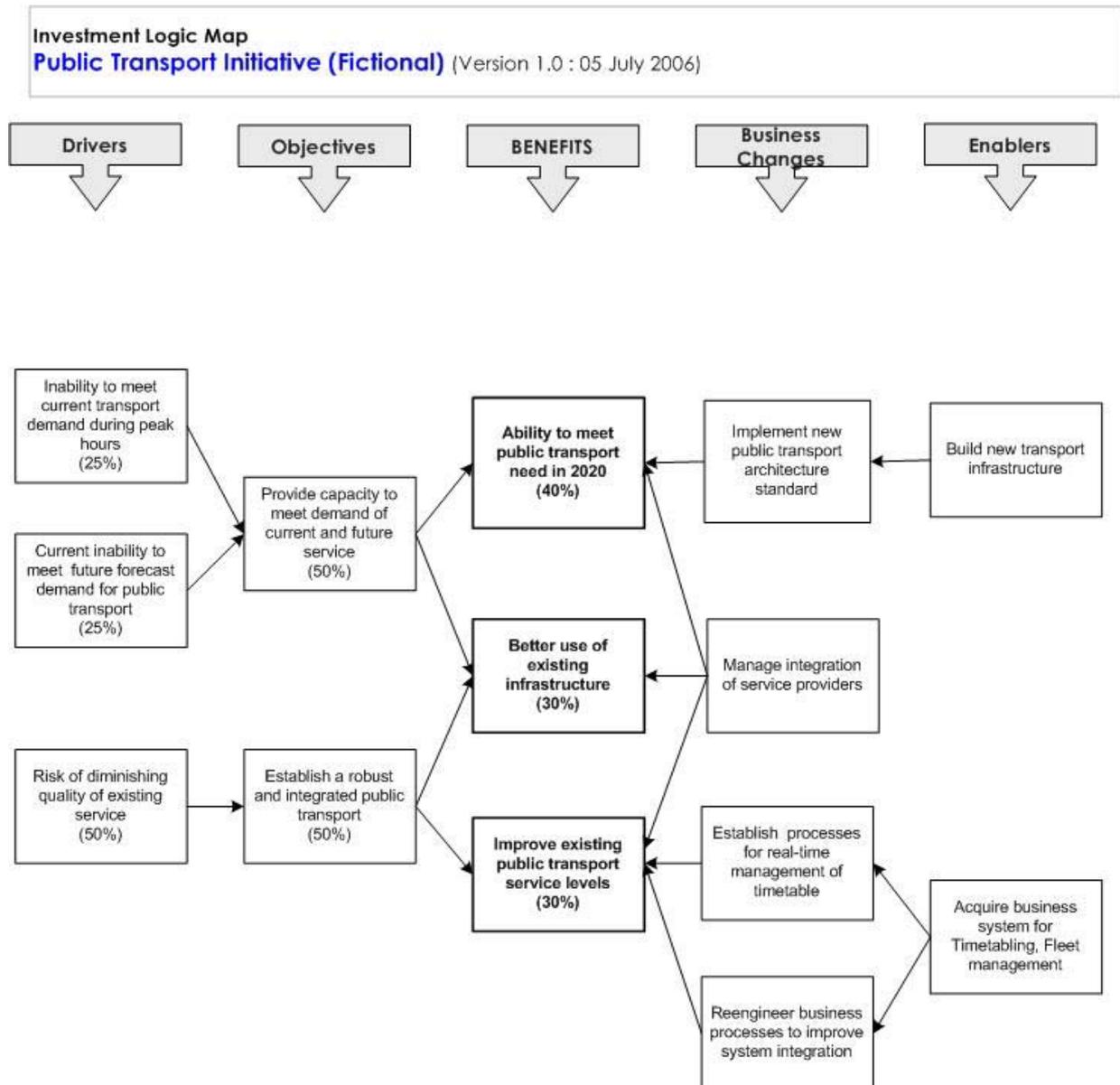
Figure 7—Investment Logic Map: Weightings



2.8 Completed Investment Logic Map

The following Investment Logic Map on transportation investment was developed by the Office of the CIO. The centre column has been greyed and bolded to highlight the benefits as this is the focal point for the map.

Figure 8: Completed Investment Logic Map



Appendices

Appendix 1: Glossary

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.

CIO

Chief Information Officer

Government

Government is the party that has the confidence of the lower house, and from whose numbers ministers are appointed.

ICT

Information and Communications Technologies

Investment Logic Map

An investment logic map is a clear, diagrammatic representation of the relationships between the investment rationale (drivers, objectives and benefits) and the project activities (business changes and enablers).

Investment Management Standard

The investment management standard is a document which provides direction on the implementation of this policy.

Investor

The person that has identified a business need and will be responsible for making an investment aimed at satisfying that need. The investor will ultimately be responsible for achieving the benefits that had been the intention of the investment.

IT

Information Technology

KPI

Key performance indicator

Project

A project is a planned activity that contributes to the resolution of an issue and is unique and temporary in nature. That is, has a designated end date and unique and well defined end result/s.

Appendix 2: Facilitator Notes

FACILITATOR NOTES: INVESTMENT LOGIC MAPPING WORKSHOP

These notes provide advice to facilitators on the conduct of an investment logic mapping workshop and the preparation of an investment logic map.

The areas addressed are:

- Workshop structure
- Workshop requirements
- Introduction
- Investment Description
- Developing the investment logic map
- Weightings
- Finalising the map

1. Workshop Structure

a) Introduction (10 minutes)

Introduce the approach to benefit management being rolled out across the Victorian government. The key points to address in the introduction include:

- Lifecycles - The difference between the project and investment lifecycle and the importance of this distinction for Benefit management.
- Stages - The Investment management stages, including assessing opportunity, developing a proposal, implementing the project and realizing benefits. The focus of the workshop should be on the fact that the investment logic map assists in the assessing opportunity stage.

b) Description of the investment (5 minutes)

Ask one participant to outline the scope and intent, from the business perspective, of the investment to be mapped.

c) Develop the Investment Logic Map (90 minutes)

Each element of the investment logic map is mapped in the order below

1. Drivers (20 minutes)
2. Objectives (20 minutes)
3. Benefits (20 minutes)
4. Business Changes (20 minutes)
5. IT Enablers (10 minutes)

d) Apply weightings (15 minutes)

Weightings are applied to each of the Drivers, Objectives and Benefits. Weightings can be applied either during the development of each element of the map or when all elements of the map have been completed.

e) Finalise Map (90 minutes)

Provide the investment team with a draft of their Investment Logic Map within 24 hours of the workshop. The team should meet, review and amend the map until they believe that the map accurately captures the key elements of their investment.

2. Workshop Requirements

a) Timing

The Workshop 120 minutes

Creating an Investment Logic Map requires a 2 hour workshop facilitated by a trained facilitator.

The Draft Map 90 minutes

Drafting the map in Visio takes around 1 hour.

The Review Process 120 minutes

The team that attended the workshop should meet to review the map once it has been compiled.

The Final Map 30 minutes

The facilitator should then modify the map and provide a final version to the team.

b) Attendance

Ideally there should be around 3-5 business representatives. A map cannot be effectively developed without the input of at least 2 participants. Participants should include the senior responsible investor and other decision-makers who will take ultimate responsibility and leadership in the project.

c) Requirements

Electronic Whiteboard, 3 coloured whiteboard markers, support notes (primarily for the facilitator).

d) Preparation

- Read and become familiar with the Investment Management Standard. This document outlines not only the purpose and requirements of the standard but also provides guidelines for the development of the investment logic map.
- Send an email outlining the purpose and scope of the workshop to the workshop organiser.
- Request some general information (1-2 pages) regarding the scope and intent of the project and the names of the participants.
- Prior to the workshop ask participants to consider what Drivers led to the investment decision.
- Review the information provided and underline any key statements that reflect the Drivers, Objectives, Benefits, Business Changes and IT Enablers.

3. Introduction

a) Outline the rationale for investment management and the place of Investment Logic Mapping within the Investment Management Standard (5 minutes)

Your introduction should be short, highlighting the business relevance and benefits of Investment Logic Mapping.

b) Key Points

Government demanded a simple, effective approach to investment management so that that:

- Investments are well targeted, well managed and the planned benefits are delivered
- the benefits arising from investment in information technology are better evaluated, monitored and communicated
- the actual reason for undertaking the investment is articulated at the outset of an investment
- investments are monitored throughout the investment lifecycle and beyond project budget, scope and timeframes could be measured and monitored

The reasons for undertaking benefit management are to:

- enable Government to achieve better value for money

The Investment Management process involves four distinct stages:

- **Assess Opportunity**

This is the process of determining which benefits are to be measured during the investment lifecycle. The key benefits (most important and easily measured) are identified and diagrammatically represented in an investment logic map and the strategic alignment workshop.

- **Develop Proposal**

This is the process creating the business case and the benefit management plan. The business case and benefit management plan is built around the investment logic map. The focus here is to “profile” each benefit identified in the map by assigning KPI’s, responsibilities and high-level deliverables (business changes and enablers).

- **Implement Project**

This stage focuses on Project Management and should use existing project methodologies. The Investment Management standard does not specify any approaches to support the ‘Implement Project’ stage of the lifecycle.

- **Realise Benefits**

Once the investment has been funded, the reporting of benefits can commence.

Finally, provide participants with a brief description of workshop activities, indicative timing and process for preparation of a draft investment logic map.

4. Investment Description

a) Description of the investment

5 minutes

Ask one participant to outline the scope and intent, from the business perspective, of the investment to be mapped.

This provides an opportunity to:

- establish whether all participants have a shared understanding of the scope, purpose and issues associated with project
- identify key features of the project and mentally note the most important aspects for use at the start of the mapping process
- identify potential Drivers that could be used to start the mapping activity

5. Developing the Investment Logic Map

<p>Starting off</p> <p>List each of the major map categories across the whiteboard:</p> <p>Drivers, Objectives, Benefits, Business Changes, Enablers</p> <p>During the process of defining the Drivers, Objectives and Benefits consider the audience for this document and ensure that each element resonates with or persuades the major decision-makers. i.e. either the Premier and/or Treasurer for an ERC bid or Department senior executives for an internally funded project.</p> <p>When developing the map it is important to be succinct and economic with words used in each element of the map. Each will ultimately be translated into a heading in the project's business case and be used in project reporting. Ideally map elements should contain between 3-7 words.</p> <p>Step 1 - Drivers</p> <p>Question 1 – ‘What are the Drivers or imperatives for this investment?’</p> <p>Establishing the Drivers is the foundation task in the development of an effective Investment Logic Map.</p> <p>Drivers are:</p> <ul style="list-style-type: none">• Typically problems or negative issues that have been identified• External pressures for change to which the investment can be seen as a response• They are always outside the control of the project team• They will always relate to the business environment, not the IT environment <p>Driver Statements typically have a negative theme:</p> <ul style="list-style-type: none">• Inability to do deliver, comply with, achieve• High risk of failure....• Need to• Unmet or excessive demand for....• Lack of... <p>Typical number of Drivers is 1-5.</p> <p>Adding Drivers</p> <p>You should:</p>	<p>Notes</p>
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- Ask the group ““What would be the result if we did not do this project?”
- List the Drivers on the left hand side. Each Driver must be linked to at least one Objective. Objectives can be associated with multiple Drivers.
- Write, reflect and re-work each of the Drivers.

It is usual that you will write, reflect and re-work each of the Drivers several times during the workshop as you and the group try to articulate the reason/problem that this project is trying to address.

Step 2 - Objectives

Question 2 – ‘What are the Objectives or investment outcomes?’

The Objectives listed in the map present the outcomes that the investment is trying to achieve.

Objectives are:

- Organisational targets for achievement set in relation to the overarching Drivers
- The Objectives of this specific investment
- Typically positive outcomes that have been identified
- They are always inside the control of the project team
- They will always relate to the business environment, not the IT environment

Objective Statements typically have a positive theme:

- Improve.....
- Create
- Provide
- Advance..

Each Objective must be linked to at least one Driver and can have multiple Drivers. Typical number of Objectives is 1-6.

Adding Objectives

You should:

- Ask the group “What outcome/s is this investment trying to achieve?”

NOTES

- List the Objectives to the right of the Drivers
- Write, reflect and re-work each of the Objectives
- Link the Objectives to the Drivers to which they relate. The Linking activity is important as it defines which Objectives will address a Driver. The link arrow points from the Driver to the Objective.

Step 3 Benefits

Question 3 – ‘What advantage or benefits will be gained from the investment?’

All investments should result in quantifiable benefits of either a financial or non-financial nature. The 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.

The Benefits listed in the investment logic map are those expected over the life of the investment, rather than over the life of the project. These Benefits are not necessarily all those associated with the investment simply the most important and those that will be measured, monitored and reported.

Benefits that cannot be measured using KPI's should not be listed in the investment logic map but may be included in the business case.

Benefits are:

- a measurable positive or negative impact on one or more individuals resulting from change
- the direct result of changes in the way business operates
- often related to improvements in cost, speed or quality when pertaining to ICT.

Benefits typically have a positive theme:

- Improvement in
- Cost savings
- Provide
- Better value, service.....
- Reduction in....

The maximum number of Benefits listed in the map is 6. Each Benefit must be linked to at least one Objective and no more than two. They must be

NOTES

able to be assessed on the basis of 1-2 KPI's per Benefit. Each Benefit must be realised through at least one business change

Adding Benefits.

You should:

- Ask the group "What are the benefits for the Victorian citizen?"
- List the Benefits to the right of the Objectives
- Write, reflect and re-work each of the Benefits
- Consider what KPI's can demonstrate that the Benefit has been achieved
- Link the Benefits to the Objectives to which they relate.

Step 4 Business Changes

Question 4 – 'What changes to business processes need to occur?'

Business Changes are those changes within the organisation that must occur to realise any benefit. They can encompass any activity in which behaviour has been modified in some way, no matter how insignificant.

Business Changes typically include:

- Change culture to improve information sharing
- Training and support for staff (cultural, process, system)
- Develop new policy on interventions and funding models
- Behavioural shift toward using new software

Each Benefit must be realised through at least one business change. Business changes can have dependencies i.e. a number of Business Changes need to occur before a Benefit can be achieved.

Adding Business Changes

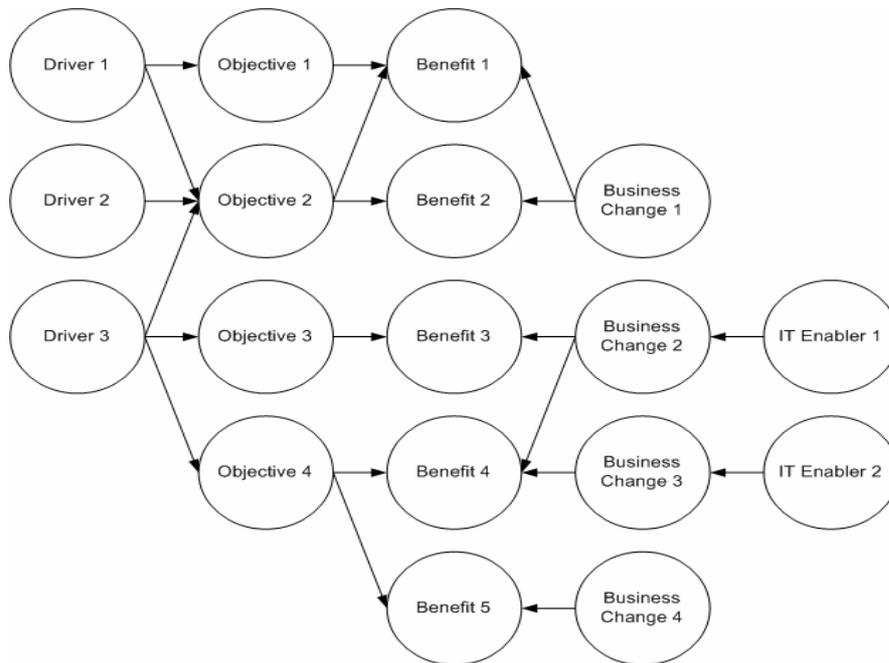
You should:

- Ask the group "What changes or activities are required within the business to successfully realize the Benefits?"
- List the Business Changes to the right of the Benefits
- Write, reflect and re-work each of the business changes
- Link the Business Changes to the Benefits to which they relate.

NOTES

Step 5 Enablers	NOTES
<p>Question 5 – ‘Which investments or enablers are going to facilitate the Business Changes?’</p> <p>Enablers:</p> <ul style="list-style-type: none">• ‘Enable’ changes to be made to the way business operates• should not be considered an end in themselves• are they only part of the investment logic map that can be considered optional• should be represented in terms of the ‘high level’ standalone components of the enabler being implemented. <p>Typical Enablers include:</p> <ul style="list-style-type: none">• Data warehouse• Upgrade standard operating environment• Develop collaboration tool• Purchasing of an asset <p>Enablers can have a dependency (i.e. a number of Enablers need to occur before a Business Change can be achieved).</p> <p>Adding Enablers</p> <p>You should:</p> <ul style="list-style-type: none">• Ask the group “What components are required to achieve the Benefits?”• List the Enablers to the right of the Business Changes• Write, reflect and re-work each of the Enablers• Link the Enablers to the Business Changes to which they relate. Links are not required for all Business Changes as some will not need an Enabler in order to take place.	

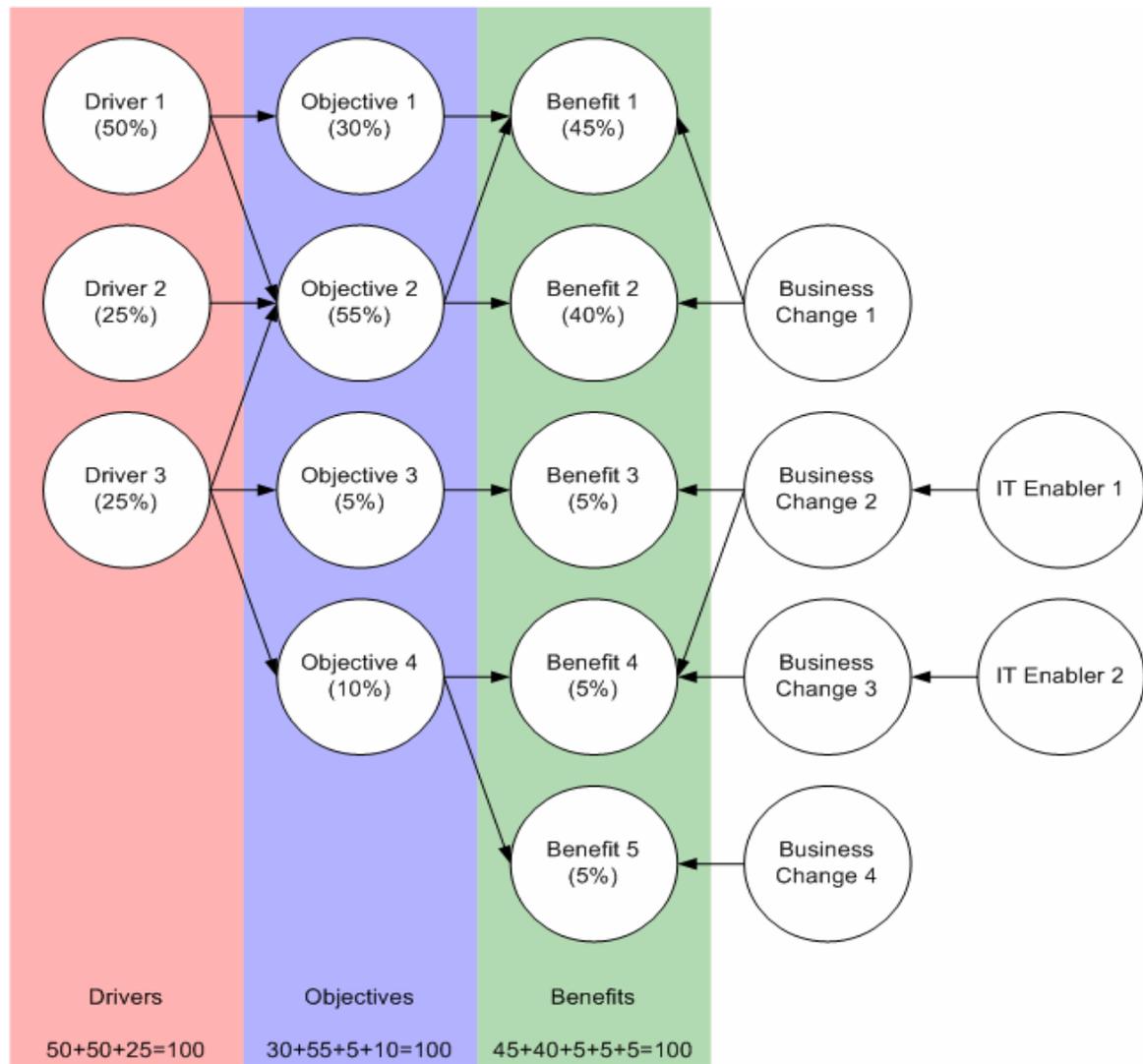
Figure 9: Investment Logic Map: Steps 1- 5



6. Weightings

Applying Weightings	NOTES
<p data-bbox="193 371 1034 443">Question: How important are each of the Drivers, Objectives and Benefits?</p> <p data-bbox="193 461 1066 622">The significance of a Benefit is determined through a weighting process. The weighting process tests the logic of the map ensuring that the significance of the Benefits correlates with the importance of the Drivers and Objectives as well as the allocation of resources.</p> <p data-bbox="193 658 1107 730">Only the Drivers, Objectives and Benefits columns have weightings applied. Weightings can be applied at any time in the construction of the map.</p> <p data-bbox="193 766 721 790">Weighting the Benefits enables analysis of:</p> <ul data-bbox="193 826 981 898" style="list-style-type: none">• Benefit achievement using KPI's as not all Benefits are equal• Resource allocation in light of the significance of the Benefit. <p data-bbox="193 960 435 985">Apply Weightings</p> <p data-bbox="193 1021 349 1046">You should:</p> <ul data-bbox="193 1081 1107 1435" style="list-style-type: none">• Assign a total of 100% for each of the Driver, Objectives and Benefits columns.• Split each element's weighting amongst all those elements to which it is linked.• Determine the percentage split between elements. The split does not have to be equal rather it should reflect the contribution or significance to the linked element. In the example below Driver 1 directly contributes 30% to Objective 1 and 20% to Objective 2.	

Figure 10: Investment Logic Map: Weightings



7. Finalising the map

At the conclusion of the workshop you should print 2 copies of the whiteboard map. Give one map to the project manager and retain the second. This map will be transferred on to the investment logic map visio template.

Key points:

- Map title should comprise Investment Title; Investment Logic Map; Version number and Date.
- Spacing between map elements is generally 2 squares across and one square down.
- The number of crossed arrows between columns should be limited as too many arrows limit clarity and reader understanding.
- Linking arrows between Drivers, Objectives and Benefits columns should point to the right.
- Linking arrows between the Enablers, Business Changes and Benefits columns should point to the left.
- A dotted vertical line linking elements is used to communicate dependencies between elements.
- The order of elements in each column can be changed between the whiteboard copy and the Visio copy to improve the map presentation and readability. However the links and weightings should be maintained.
- A second version of the map can be prepared and given to the project manager (in addition to the whiteboard version) in situations where the facilitator believes that significant text or element changes are needed to improve the logic of the map.
- The map is saved using the file naming convention: ILM-*Investment Name*-Version 0.1-Date(YYYYMMDD)

Once the map is completed you should provide the investment team with a draft of their Investment Logic Map within 24 hours of the workshop. The investment team should then meet, review and amend the map until they believe that the map accurately captures the key elements of their investment.

Appendix 3: Further Information

For further information:

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