Investment Evaluation Framework

Post Completion Evaluation

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Acronyms

Acronym	Definition
ADKAR	Awareness, Desire, Knowledge, Ability and Reinforcement
ATC	Australian Transport Council
BERC	Budget and Expenditure Review Committee
BMF	Benefit Management Framework
BMP	Benefit Management Planning
DoT	Department of Transport
DSE	Department of Sustainability and Environment
DEDJTR	Department of Economic Development, Jobs, Transport and Resources
DTF	Department of Treasury and Finance
HVHR	High Value High Risk
ICB	Investment Concept Brief
ILM	Investment Logic Mapping
IMA	Investment Management Approach
IMC	Investment Management Champion
KEQ	Key Evaluation Question
KPI	Key Performance Indicator
PRC	Project Review Committee
P&P	Policy and Programs
S&P	Strategy and Planning
TAC	Transport Accident Commission
TIA	Transport Integration Act
VAGO	Victorian Auditor General's Office
IA	Infrastructure Australia
ICB	Investment Concept Brief

Executive Summary

As part of the Investment Management Approach (IMA) adopted by VicRoads, this document provides an overarching framework for post completion evaluation. It provides a one-stop-shop for principles, policy positions and guidance for undertaking post completion evaluation of projects and programs in VicRoads and use of the evaluation findings. It also documents the roles and responsibilities for conducting the post completion evaluations and the quality assurance process.

The Framework aims to provide a consistent approach to guide the preparation of evidence to assess the achievement of expected benefits post completion of projects or programs and to capture any lessons learnt from the planning and delivery processes. It also aims to meet the reporting standards and expectations of multiple stakeholders, including Gateway, Infrastructure Australia, the Department of Treasury and Finance, Department of Infrastructure and Regional Development and provide input into future audits by the Victorian Auditor General's Office.

This Framework was developed in collaboration with Policy and Programs, Strategy and Planning and Operations after an initial review of existing evaluation processes within VicRoads and is supported by a literature review (QD 1512915) of various evaluation practices in transport and other related sectors.

This Framework currently applies to infrastructure investments in VicRoads. However, it is designed to allow for the future inclusion of other activities such as policies, strategies and operational management activities.

This Framework includes six key parts, with each part consisting of a number of tasks:

- Part 1: WHY undertake post completion evaluations
- Part 2: WHAT to evaluate
- Part 3: PLANNING for the evaluation
- Part 4: WHEN to evaluate and WHO evaluates
- Part 5: HOW to evaluate
- Part 6: After the evaluation

Each part of the Framework will be relevant to different users of the Framework. Table 1 in Section 1.5 helps to direct different users to the parts of the Framework most relevant to them. The Framework is also accompanied by a number of tools and templates (listed in Appendices and/or as Quickdocs references) and is supported by an Evaluation Capacity Development Program.

The key to the Framework is that post completion evaluations need to be planned with resources and responsibilities committed during the project/program development stage. To enable a level of consistency and efficiency in collecting data for evaluations, rather than undertaking separate evaluations for different purposes this framework proposes full evaluation focussing on five Key Evaluations Questions. The application of this approach to different scale and the complexity of the investments are managed by the level of detail required for each KEQ. The five KEQs include:

- **KEQ1 (Appropriateness).** To what extent was the planning, design and delivery of the investment the most appropriate way to address the problem?

- **KEQ2 (Efficiency).** How efficient have we been in delivering the investment?
- **KEQ3 (Effectiveness).** How effective has the investment been in delivering the expected benefits and outcomes?
- **KEQ4 (Unintended Outcomes).** What are the unintended outcomes of the investment?
- **KEQ5 (Impact Sustainability).** To what extent are the benefits achieved likely to endure beyond the timeframe of the project/program?

The success of this Framework is dependent on a collaborative approach to its implementation and ownership at all levels of VicRoads to ensure consistency, quality and use of the evaluation findings to facilitate continuous improvement opportunities.

1. Introduction

1.1 The purpose of this Framework

The purpose of the Investment Evaluation Framework - Post Completion Evaluation (the Framework) is to provide a consistent approach to planning, undertaking and delivering post completion evaluations. The Framework also provides advice on how evaluation findings may be used and disseminated.

This Framework is intended to provide guidance to those planning for, undertaking and disseminating findings from a post completion evaluation.

Key drivers for the development of the Framework

VicRoads is committed to the efficient delivery of projects and programs, measuring the success of its investments and using learnings to improve future investment decisions. Recently, VicRoads has adopted and integrated an Investment Management Approach (IMA) into the investment cycle which is based on three stages – **plan, deliver and learn**. For instance, at the project development stage, Investment Logic Maps (ILMs) and the Benefit Management Plans (BMPs) are now developed for most VicRoads projects and programs. The development of a comprehensive, organisation-wide system for post completion evaluations however, has been missing from the investment cycle. This Framework is therefore necessary for VicRoads to strengthen its ability to measure and evaluate the efficiency and effectiveness of investments and to understand opportunities for improvements.

Other key drivers for the development of this Framework include:

- A shift by State Government towards outcome-focused evidence-based reporting and increased competition for funding between sectors of government.
- The Victorian Auditor-General's Office (VAGO, 2011) strong recommendation for outcome evaluations of all major road projects.
- The need for VicRoads to meet its legislative responsibilities and continuously improve its investment decision making process by learning from post completion evaluations.

VicRoads requires a framework to guide the preparation of evidence to assess the achievement of expected benefits after a project has been completed and to meet the reporting standards and expectations of multiple stakeholders, including Gateway, Infrastructure Australia (IA), the Department of Treasury and Finance (DTF), Department of Infrastructure and Regional Development and the VAGO. The Framework will also provide a consistent approach to capturing any lessons learnt from these investments.

Previously, evaluation efforts at VicRoads following the completion of most infrastructure projects focused on the implementation and processes of projects and programs (e.g. post contract reviews, handover reports and value for money reports) seeking learnings for efficiency improvements, rather than evaluating the benefits of the project or programs. Evaluation of benefits alone, after the completion of projects, are however, routinely conducted in some VicRoads programs (e.g. Safer Road Infrastructure Program). A full evaluation that considers evaluating the success of investments from both efficiency and effectiveness perspectives is rarely conducted. The development of this Framework aims to address this and seeks a level of consistency on evaluation practices across the board.

1.2 Scope

This Framework currently applies to individually funded programs and projects, rather than those that are funded recurrently. It covers the following infrastructure investments within VicRoads:

- **Major development programs/projects,** including new roads, bridges and structures, duplications and grade separations.
- **Network improvement programs and projects,** including bus and tram route improvements, bicycle and pedestrian facilities, road capacity and arterial road improvements (metropolitan and rural), metropolitan congestion and access management.
- **Capitalised programs within Asset Management** such as the Targeted Road Restoration Program.

The framework has been designed to allow for the potential future inclusion of areas of work not currently within its scope such as its application to the evaluation of Policies, Strategies, and Operational Management activities.

1.3 Methodology used to develop this Framework

This Framework was developed through a participatory approach to maximise the relevance and utility of the Framework to VicRoads staff. The process included a desktop review of all pertinent documents, a series of meetings with key VicRoads staff from Policy and Programs (P&P) and a workshop with a broader representation of VicRoads staff to clarify the scope for the Framework.

1.4 Framework structure

The Framework includes six key parts as outlined in Figure 1.

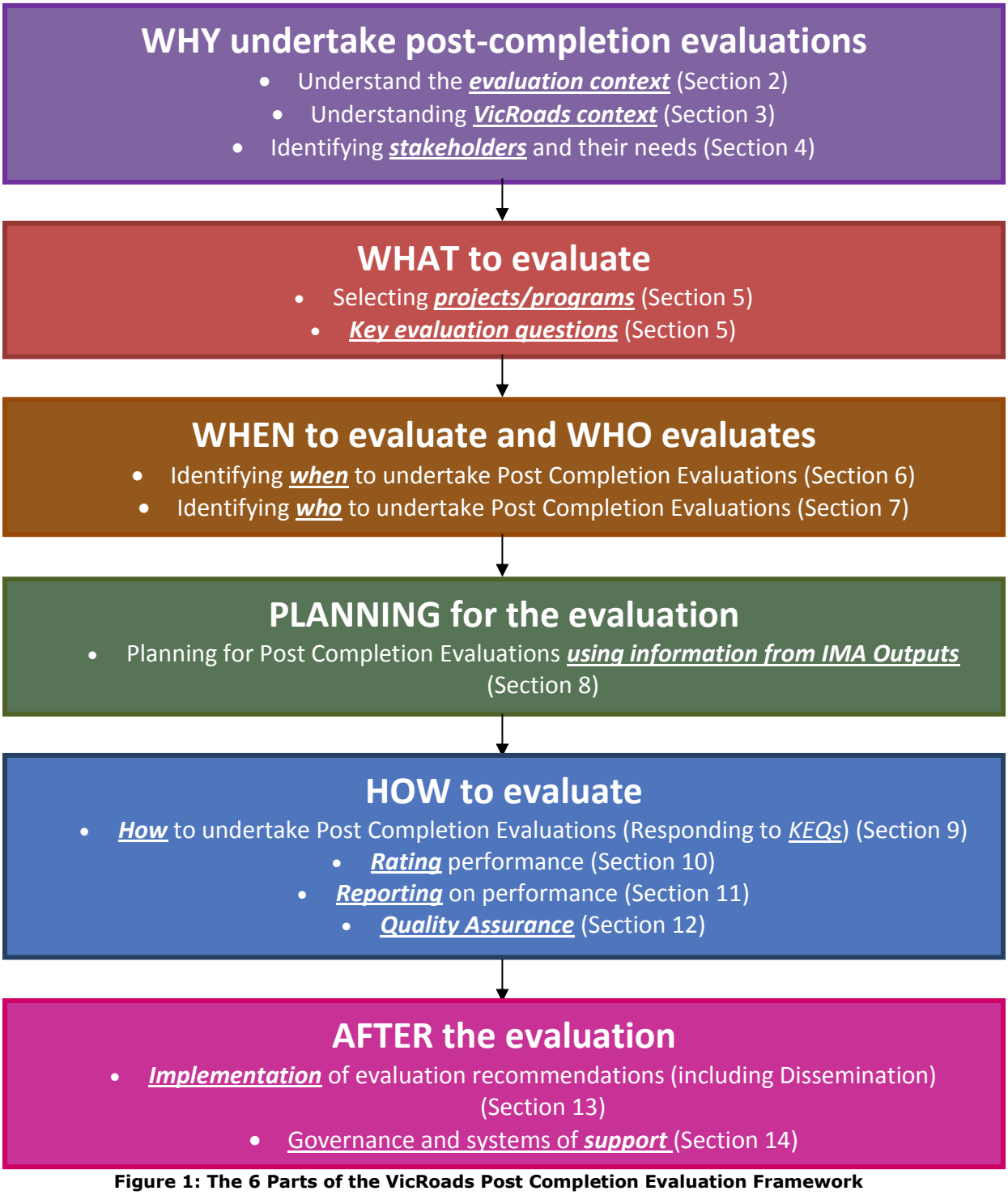

Figure 1: The 6 Parts of the VicRoads Post Completion Evaluation Framework

The following sections of this document focus on explaining each of these parts.

The following table provided a quick lookup reference for those who may be using and referring to this Framework. For each key role/responsibility, the part of the Framework which is most relevant is marked with a tick.

Internal or external responsibility	Key Roles/Responsibilities	Why	What	Who &When	Planning	How	After
Internal or External	Those involved in developing the project/program Business Case	Yes	Yes		Yes		Yes
Internal or External	Those undertaking post completion evaluations	Yes	Yes		Yes	Yes	
Internal	Director of Network Programs		Yes	Yes			Yes
Internal	P&P Directors			Yes			Yes
Internal	P&P Managers and Staff	Yes	Yes	Yes	Yes	Yes	Yes
Internal	Operations Directors		Yes	Yes			Yes
Internal	Operations Managers and Staff	Yes	Yes	Yes	Yes	Yes	Yes
Internal	Investment Management Champions (IMCs)	Yes				Yes	Yes
Internal	Project Review Committee (PRC)						Yes
Internal	Strategy and Planning						Yes

Table 1: Lookup Reference for Users of the Framework

1.5 Supporting documents

This Framework is also supported by a number of appendices. These appendices are listed in Table 2, along with the part of the Framework to which they apply.

Document	Appendix	Section of Framework
Governance structure for VicRoads Investment Evaluation	Appendix One	Section 2
Developing an Evaluation Scope for Post Completion Evaluations	Appendix Two	Section 7
Guidance on Selecting an External Evaluation Consultant	Appendix Three	Section 7
Investment Logic Map (ILM) template	Appendix Four	Section 8
Benefit Management Plan (BMP) template	Appendix Five	Section 8
Investment Concept Brief (ICB) template	Appendix Six	Section 8
Common Evaluation Methods used to collect data	Appendix Seven	Section 9
Scoring Guide for KEQ Specific Considerations	Appendix Eight	Section 10
A Guide to Assuring Quality in Post Completion Evaluation Reporting	Appendix Nine	Section 12
Key Concepts and Definitions	Appendix Ten	All

Table 2: Supporting Documents

2. Understanding the Evaluation Context

2.1 What is a post completion evaluation?

Post completion evaluations are defined by the Australian Transport Council (ATC) as "the specific process of reviewing the outcomes and performance of an initiative after it has been implemented" (ATC, 2006).

In general, post completion evaluations assess:

- how effectively the initially stated objectives and purpose of the project have been met.
- how effective the methods of planning and selecting the project were
- how efficient the implementation process was (Austroads, 2005).

A post completion evaluation therefore should look at all aspects of the project/program including its planning, implementation and benefit identification processes (process evaluation) and the outputs and outcomes (outcome evaluation) it produces.

As a full evaluation, post completion evaluations consider the inputs, activities, outputs, benefits and outcomes of the project at the same time. Figure 2 summarises how these five elements are related, with further explanation provided below:

- **Inputs** are usually the people, resources and materials used in activities or processes.
- **Activities** are tasks undertaken during the planning and implementation of the project, such as defining the problem, benefits and solution options, as well as any scope changes through procurement, risk management etc. during the delivery stage.
- The **output** is the physical result of the project. The outputs of a project may also include the delivery within scope, budget and timeframes.
- The **benefit** is the effect of the output, for example, better transport network efficiency. These are organisation level benefits; reflecting the contribution that VicRoads makes to broader Government outcomes. Investment indicators (often referred as change indicators or performance indicators) reflect the contribution of specific investments to the benefits sought by VicRoads and are used as an indicator to measure the achievement of those benefits; for example, reduced travel times.
- The **outcome** is the effect that is longer term and is often more difficult to measure. The outcome is the wider change or higher order outcomes at government level, for example, changes to people's socio-economic wellbeing, or economic growth and development, that is enabled by the benefit. Data collection may be more difficult and outcomes could be harder to directly attribute to a particular project.

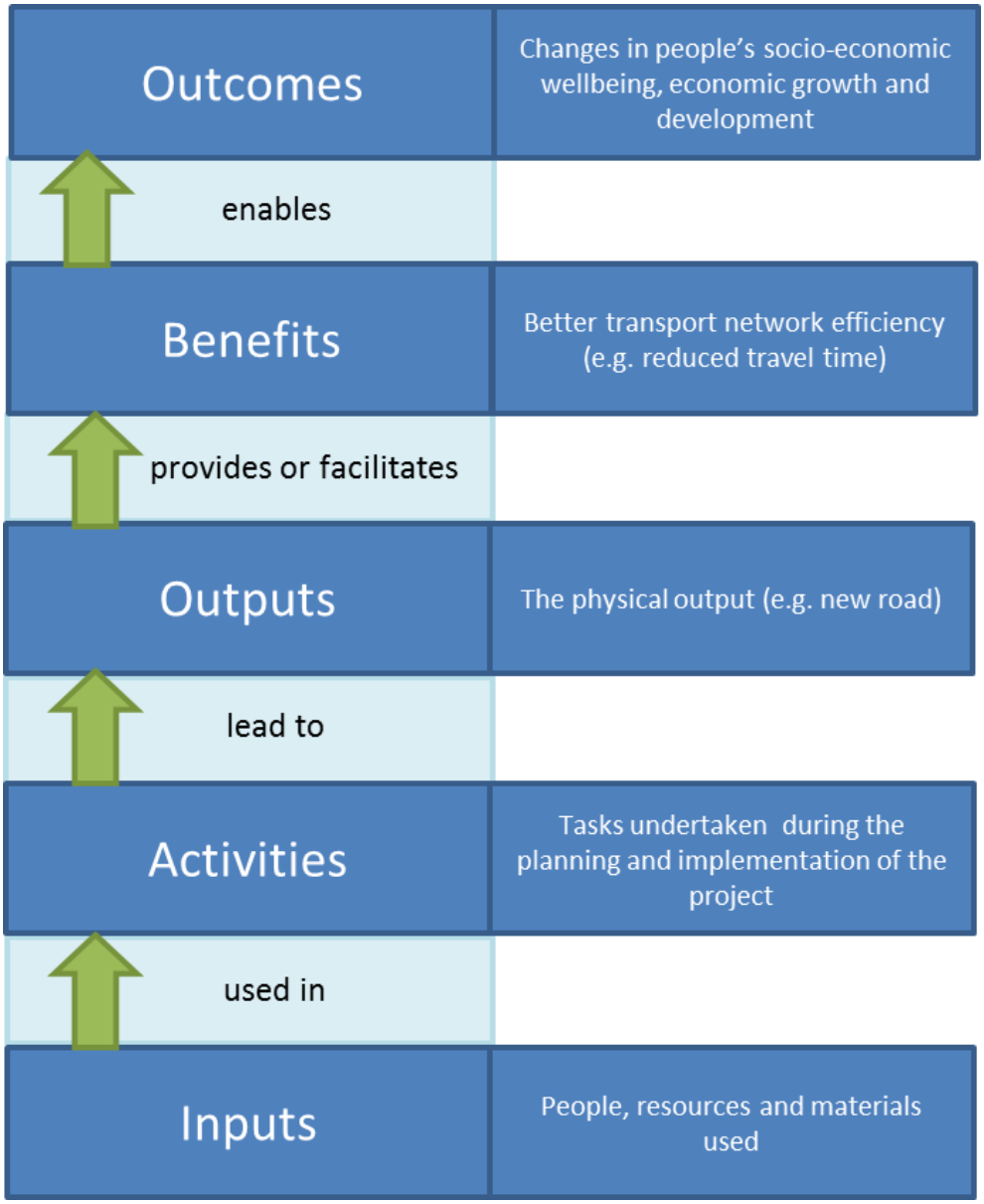

Figure 2: Inputs, activities, outputs, benefits and outcomes

2.2 How this Framework fits into the evaluation cycle

Evaluation is a general term to mean "the systematic collection and analysis of data about **processes**, **outputs** and **outcomes** to allow us to make statements, judgments, claims and conclusions which have the potential to impact on current and future decision-making" (Patton, 1997).

There are different stages of evaluation depending on the stage of a project. The VicRoads evaluation cycle is shown in Figure 3 and includes the following three stages:

- Appraisal – "process of determining the impacts and overall merit of a proposed initiative, including the presentation of relevant information for consideration by decision makers" (ATC, 2006).
- Monitoring – the continuous assessment of project implementation in order to "facilitate risk management, measure progress towards achievement of objectives and to inform continuous improvement" (Regional Growth Fund, 2011).
- Evaluation – "the specific process of reviewing the outcomes and performance of an initiative after it has been implemented" (ATC, 2006).

Figure 3: Evaluation cycle

It is the 'evaluate' stage of the evaluation cycle which this Framework addresses. In VicRoads this stage is usually considered as 'post completion evaluation'.

2.3 How this Framework fits into the investment cycle

Investment is defined by the DTF as "the commitment of the resources of an organisation with the expectation of receiving a benefit" (DTF, 2013a).

The VicRoads investment cycle is shown in Figure 4 and comprises of the following three stages:

- Plan - planning for benefits/ outcomes of the investment upfront.
- Deliver - delivering to maximise those benefits/ outcomes.
- Learn - evaluating and learning at completion to confirm outcomes achieved and to improve future decision making.

Figure 4: VicRoads investment cycle

The investment cycle forms the basis for all VicRoads projects and programs and is consistent with the Victorian Government Investment Lifecycle Framework (DTF, 2012c), the Austroads project evaluation process (Austroads, 2009) and the ATC National Guidelines for Transport System Management (ATC, 2006). This is illustrated in Figure 5 below, where:

- VicRoads investment cycle is represented at the centre
- ATC and Austroads approaches to the investment cycle are represented in the middle
- DTF Investment Lifecycle Framework (DTF, 2012c) is represented on the outer edge.

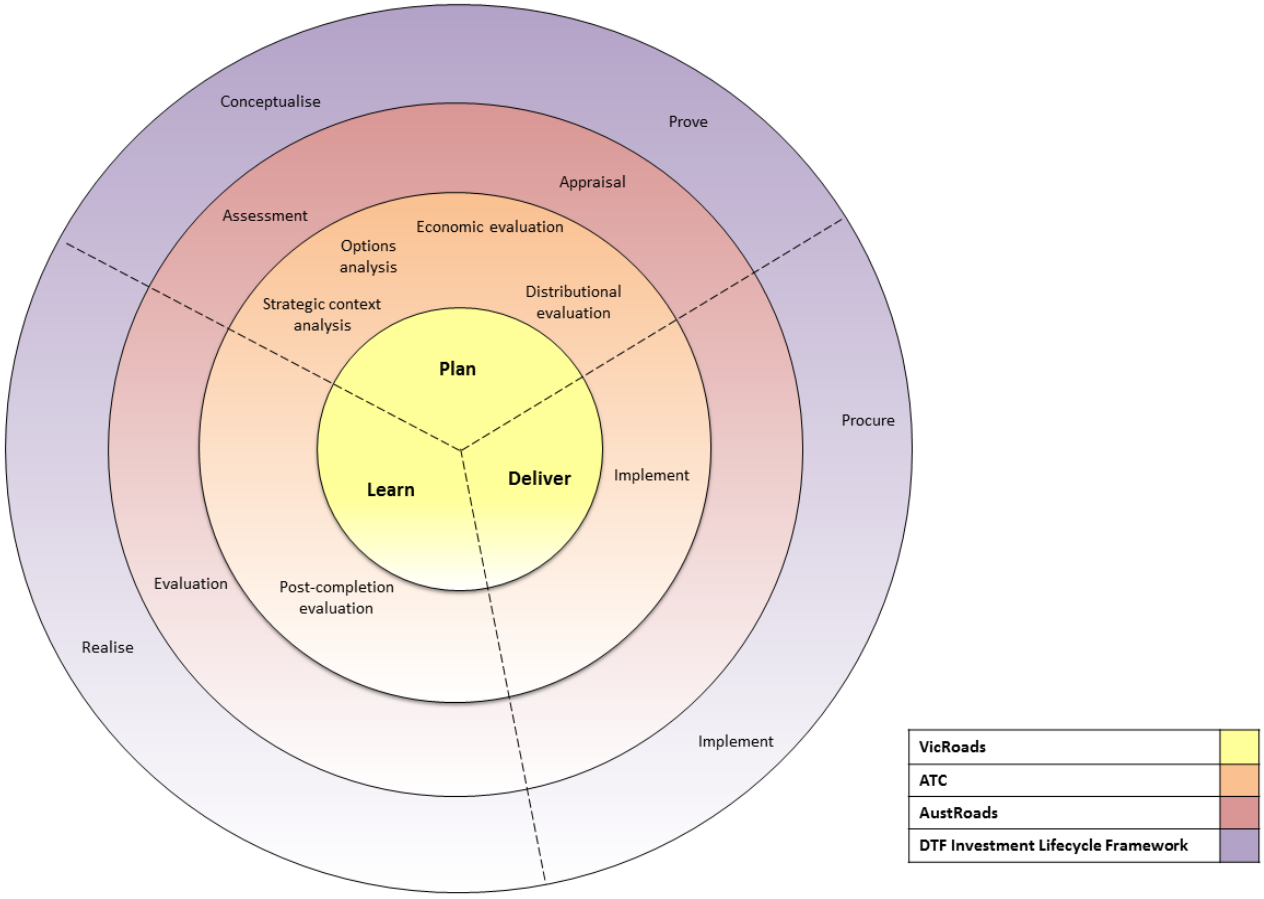

Figure 5: The investment cycle based on VicRoads, ATC, Austroads and the DTF guidance Approach

In general, each stage of the investment cycle corresponds to a stage of the evaluation cycle such that:

- during the 'plan' stage of the investment cycle, appraisals are undertaken
- during the 'deliver' stage of the investment cycle, monitoring is undertaken
- during the 'learn' stage of the investment cycle, post completion evaluations are undertaken

It is important however, that post completion evaluations are also considered at the planning and delivery stages of the project, as explained in the following section.

2.3.1 Integrating post completion evaluations throughout the investment cycle

Although post completion evaluations are undertaken during the 'learn' stage of the investment cycle they should be integrated throughout the whole investment cycle, as described below:

- **Plan stage of investment cycle.** Post completion evaluations should be planned and scheduled with appropriate time and resources in the 'plan' stage of the investment cycle, to ensure all post completion evaluation activities are costed and outputs can be delivered within the specified time-frame. During the plan stage of the investment cycle, the focus for post completion evaluation is to get the logic of investment right, define the purpose and any key evaluation questions (KEQs) including identifying correct benefits, indicators and targets, consider what data and data sources are needed to address the KEQs and to identify which stakeholders would add value or be interested in the post completion evaluation. Resources are allocated and timelines, funding and a commitment to undertake a post completion evaluate are also established.
- The Investment Management Approach (IMA) outputs produced (i.e. Investment Logic Maps (ILMs) and Benefit Management Plans (BMPs)), as well as any Benefit Cost Analysis (BCA) undertaken at this stage can also be used in the post-completion evaluation. Note: all major investments have full detailed analysis undertaken at this stage which are usually captured in Business Cases and are relevant for post completion evaluations.
- **Deliver stage of investment cycle.** During project and program delivery, progress reporting and monitoring (i.e. routine and systematic collection of data that may be used in post completion evaluations) will be conducted. For some programs it may be necessary to undertake a mid-term review.
- **Learn stage of investment cycle**. This stage will involve building on the scope of the evaluation and planning undertaken at the plan stage of the investment cycle. Post completion evaluations will be carried out and reporting will be undertaken with results then distributed for use by appropriate stakeholders.

3. Understanding VicRoads Context

3.1 Organisational Context

VicRoads is a statutory corporation responsible for planning, developing and managing Victoria's arterial road network, and delivering registration and licensing services. VicRoads manages over 22,000 kilometres of roads and 3,133 bridges and processes more than 22 million transactions a year for 3.7 million licensed drivers and 4.9 million registered vehicles. These road and registration and licensing services are delivered by approximately 2600 staff through a network of more than 50 offices located across Victoria (VicRoads, 2013f).

In addition to state-wide and federal Government objectives, VicRoads is guided by the *VicRoads Strategic Directions 2012 – 2014* (2013g) document which sets out four objectives that focus the delivery of VicRoads services and programs under the overall theme of 'connection':

- Operate and maintain the road system to help our customers travel easily and reliably
- Develop the road system to improve connections between places that are important to our customers
- Improve road safety
- Make the road system more environmentally sustainable.

Each objective is supported by strategic priorities that highlight focus areas for investment.

3.2 Investment Management Approach in VicRoads

The Investment Management Approach (IMA) in VicRoads builds on the Department of Treasury and Finance's (DTF's) Investment Management Standards, which have evolved since 2004 (VicRoads, 2013a). They provide a process for managing investments using four distinct stages, each with associated tools, steps and outputs. The stages of IMA are outlined in the Investment Management Standard (DTF, 2013a) and are illustrated in Figure 6 below.

The IMA connects each stage into a sequential process which is used for project planning and development, management and evaluation within VicRoads. More detail on the IMA is provided in a number of VicRoads documents (see VicRoads, 2013a, VicRoads, 2012e).

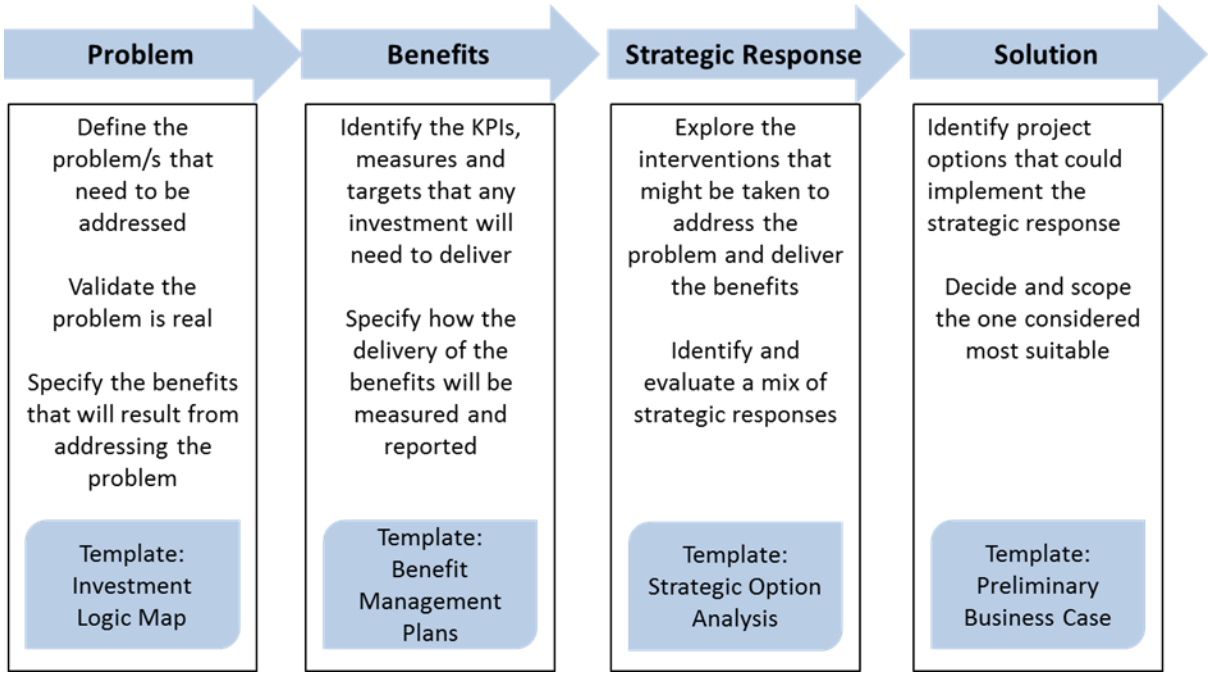

Figure 6: The DTF Investment Management Approach

3.3 Evaluation principles

The set of evaluation principles listed in Table 3 underpins and informs the management and delivery of evaluations and benefit/outcome management by VicRoads[1]. The principles facilitate best practice evaluation by VicRoads and external stakeholders, especially given the wide-ranging scope, size and scale of different programs and projects to be evaluated within VicRoads. These principles can be applied to ensure that the evaluation is relevant to the values and practice of VicRoads when planning, managing and utilising evaluation in the investment cycle.

[1] These principles were drawn from a range of internal and external sources, including DTF (2005), ATC (2006), DSE (2012), VicRoads (2012e), and refined with input from key VicRoads investment management stakeholders.

Principles for VicRoads evaluation

Accountability. Decision-makers should be accountable to government and community for the outcomes of management actions.

Timeliness. The impact that evaluation results can have on decision makers and stakeholders is dependent on the timely availability of results. An evaluation should be timed to fit in with organisational and whole of government planning and resource allocation processes.

Consistency. A consistent structure, approach and language must be used in the investment management cycle when addressing evaluation.

Credibility. Evaluations must be based upon robust and rigorous evidence, using well designed methodologies. Where appropriate, evaluations must be conducted independently to enhance their credibility.

Simplicity. Evaluation reports should be clear, succinct, easily understood and avoid unnecessary jargon.

Usability. An effective evaluation is one that can be used. Evaluation outputs must be able to functionally inform decision making.

Improvement. There must be feedback between evaluations and project development and delivery to ensure learning and continuous improvement throughout the investment cycle.

Fit-for-purpose. The scale and complexity of evaluations should be commensurate with the project and/or program being evaluated.

Table 3: Principles for VicRoads Evaluation

3.4 Sources of funding for investments

VicRoads is funded from a range of sources, including Federal and Victorian Government funding and the Transport Accident Commission (TAC). VicRoads has adopted the IMA as a process for developing business cases for projects and programs that are funded through the Federal and Victorian State budget (VicRoads (2012e). All investment development processes within VicRoads including internal Business Area Planning bids and policy, and strategy development, are now encouraged to use the IMA.

3.5 Sources of funding for post completion evaluations

Funding for post completion evaluations will come from two sources:

- Funding for collecting and analysing baseline data is sourced from project/program development funding
- Each bid made for capital (non-recurrent) funding is required to set aside 3% of the Total Estimated Cost (TEC) for post completion evaluation (up to a total of $90,000 maximum[2]). This funding is maintained in a pool of funds administrated by Policy and Programs for evaluation.

Further guidance on funding evaluations is outlined in the Roads Program Guidelines.

3.6 Roles and responsibilities for post completion evaluations

Detailed roles and responsibilities for planning and managing post completion evaluations in VicRoads are outlined in Appendix One, "Governance Structure for VicRoads Investment Evaluation" (VicRoads 2013).

The "Governance Structure for VicRoads Investment Evaluations" states that P&P is "responsible for developing suitable policies and strategies to ensure investments are evaluated" (VicRoads, 2013b). This includes providing oversight on post completion evaluations and providing guidance and support to all other areas within VicRoads. In addition, within the governance structure "both P&P and Operations are responsible for leading the post completion evaluation for programs and projects respectively".

More specifically, P&P is responsible for:

- The process of selecting programs/projects for post completion evaluations. P&P will work closely with project managers to determine an appropriate sample of projects within programs for evaluation within their respective operational areas.
- Developing mechanisms for reporting post completion evaluation learnings to the Project Review Committee (PRC) to ensure that learnings are captured and incorporated into future project and program development.
- P&P also play a leading role in developing this Post completion Evaluation Framework, and supporting its use and application across the organisation, guided by the Evaluation Capability Development Plan (EDCP).
- Developing and supporting the utilisation of post completion evaluation tools, templates and procedures across the organisation.

[2] Though this amount may be higher if negotiated in the bid (VicRoads, 2012d).

Other key roles in the "Governance Structure for VicRoads Investment Evaluations" include:

- **Director of Network Programs** - responsible for ensuring that post completion evaluations, significant learnings reports and dissemination plans for all programs are prepared and presented to the PRC.
- **Operations Directors** - responsible for ensuring that post completion evaluations, significant learnings reports and dissemination plans are prepared and presented to PRC for all projects of state or national significance. Operations Directors are also responsible for determining when evaluations of other projects have uncovered significant findings for VicRoads and should be presented to the PRC.
- **The Project Review Committee (PRC)** – responsible for "reviewing and endorsing recommendations regarding the capture and promotion of lessons learnt from evaluations of existing projects and programs for incorporation into the scope of future initiatives".

3.6.1 Investment Management Champions

Although not explicitly mentioned in "Governance Structure for VicRoads Investment Evaluations", the role of Investment Management Champions (IMCs) is central to the VicRoads IMA and plays a pivotal role in facilitating the implementation of outcome management and embedding this approach across VicRoads. IMCs "provide an active feedback loop on any learnings from developing or evaluating projects from their business areas to Policy and Programs" (VicRoads 2013c).

In assisting staff from business areas across the organisation, IMCs can play an important role in project improvement by:

- Building awareness of the role of post completion evaluation within VicRoads and by encouraging the utilisation of evaluation outputs;
- Influencing change by sharing learnings within and between projects and programs;
- Providing encouragement for managers to utilise existing resources and systems such as the project learning database to document, share and use learnings.

IMCs are endorsed by the VicRoads Directors and are supported by P&P to fulfil this role. A summary of Roles and Responsibilities are provided in Tables 4a-4d.

Roles and Responsibilities – Post completion Evaluation Framework	Director Network Programs	P&P Managers and Staff	Operations Directors	Other P&P Directors	S&P Directors	Operations*	IMCs	PRC	SLT
Development		Yes							
Endorsement	Yes		Yes						Yes

Table 4a Summary of roles and responsibilities – Post completion Evaluation Framework

*Including regional offices, projects and technical services.

Roles and Responsibilities – Post completion Evaluations (Program)	Director Network Programs	P&P Managers and Staff	Operations Directors	Other P&P Directors	S&P Directors	Operations*	IMCs	PRC	SLT
Selecting		Yes							
Scoping		Yes	Yes						Yes
Managing**		Yes							
Endorsement	Yes							Yes	
Learning	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Table 4b: Summary of roles and responsibilities – Post completion Evaluations (Program)

*Including regional offices, projects and technical services.

**Managing evaluations comprises commissioning and reporting.

Roles and Responsibilities – Post completion Evaluations (Projects)	Director Network Programs	P&P Managers and Staff	Operations Directors	Other P&P Directors	S&P Directors	Operations*	IMCs	PRC	SLT
Selection		Yes				Yes			
Planning						Yes			
Managing						Yes			
Endorsement			Yes					Yes	
Learning	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Table 1c: Summary of roles and responsibilities – Post completion Evaluations (Projects)

*Including regional offices, projects and technical services.

Roles and Responsibilities	Director Network Programs	P&P Managers and Staff	Operations Directors	Other P&P Directors	S&P Directors	Operations*	IMCs	PRC	SLT
Evaluation capability building	Yes	Yes	Yes			Yes			

Table 4d: Roles and responsibilities for evaluation capability building

*Including regional offices, projects and technical services.

4. Identifying Stakeholders and their Needs

The main purpose of post completion evaluations is to provide valuable information and feedback about a program or project after it has been completed. Stakeholders are those who will benefit from this information and feedback, and can be defined as either primary or secondary where:

- **Primary** stakeholders – are agencies and organisations that will directly use information generated by the post completion evaluation to inform decision making
- **Secondary** stakeholders – are agencies and organisations that will indirectly use information generated by the post completion evaluation.

Stakeholders can also be internal or external, such that:

- **Internal** stakeholders - comprise of VicRoads staff
- **External** stakeholders - encompass a range of state and federal government agencies and authorities, other organisation and the general public.

4.1 Stakeholder needs

Each stakeholder has different information needs that are outlined in Table 5. In summary, the information needs are:

- **Accountability**: to demonstrate the worth or value of an investment
- **Best practice**: to contribute to the knowledge of what works and why within a given context and to compare with similar projects
- **Learning and improvement**: to understand how a project or program can be improved
- **Interest.**

Overall, the information needs of stakeholders at an organisational level are the same as those at a project level. The difference relates to the *scale* at which information is required, accessed and used.

External stakeholders	Primary Stakeholders	Secondary Stakeholders	Information needs - Accountability	Information needs - Best practice	Information needs - Learning & improvement	Information needs - Interest
Department of Treasury and Finance (DTF)	Yes		Yes	Yes		
DTF Gateway	Yes			Yes		
Transport Accident Commission (TAC)	Yes		Yes			
Federal Department of Infrastructure and Transport (DIT)	Yes		Yes			
Infrastructure Australia (IA)		Yes		Yes		
Victorian Auditor General's Office (VAGO)		Yes	Yes			
Other organisations (i.e. DEDJTR, PTV, Bicycle Network Victoria etc.)		Yes				Yes
General Public		Yes				Yes

Table 5a: External Stakeholders' Needs

Internal stakeholders	Primary Stakeholders	Secondary Stakeholders	Information needs - Accountability	Information needs - Best practice	Information needs - Learning & improvement	Information needs - Interest
Policy & Programs Directors	Yes		Yes	Yes	Yes	
Policy & Programs	Yes		Yes	Yes	Yes	
Operations Directors	Yes		Yes		Yes	
Operations	Yes		Yes		Yes	
Project Review Committee (PRC)	Yes				Yes	
Strategy & Planning Directors		Yes			Yes	
Strategy and Planning		Yes			Yes	
Investment Management Champions (IMCs)	Yes				Yes	

Table 5b: Internal Stakeholders' Needs

5. What to Evaluate?

This section provides guidance on how to select programs and projects in VicRoads for post completion evaluation and what evaluation questions to address when undertaking the evaluations.

5.1 Selecting Programs/Projects to Evaluate

In general:

- A **program** is considered as a group of projects which have been funded together to achieve an overall objective or to resolve a common set of 'problems'.
- A **project** may be part of an overarching program, or may be funded and delivered on its own.

All programs and stand alone projects that have a business case will be evaluated.

If a project is part of an overarching program, a selection process will be applied to select a number of projects within the program for evaluation.

The selection process to select which projects to evaluate in a given program is provided in Figure 7, with details about each element of the process included in Table 6. Projects should be selected for evaluation at the time of funding. As outlined in the Evaluation Governance Structure (refer to Appendix One), the Program Managers in consultation with Operation Services will be responsible for selecting projects for evaluation within their respective programs. While figure 7 provides a general guide, discretion can be used during the selection process to ensure an appropriate sample of projects is selected for each program.

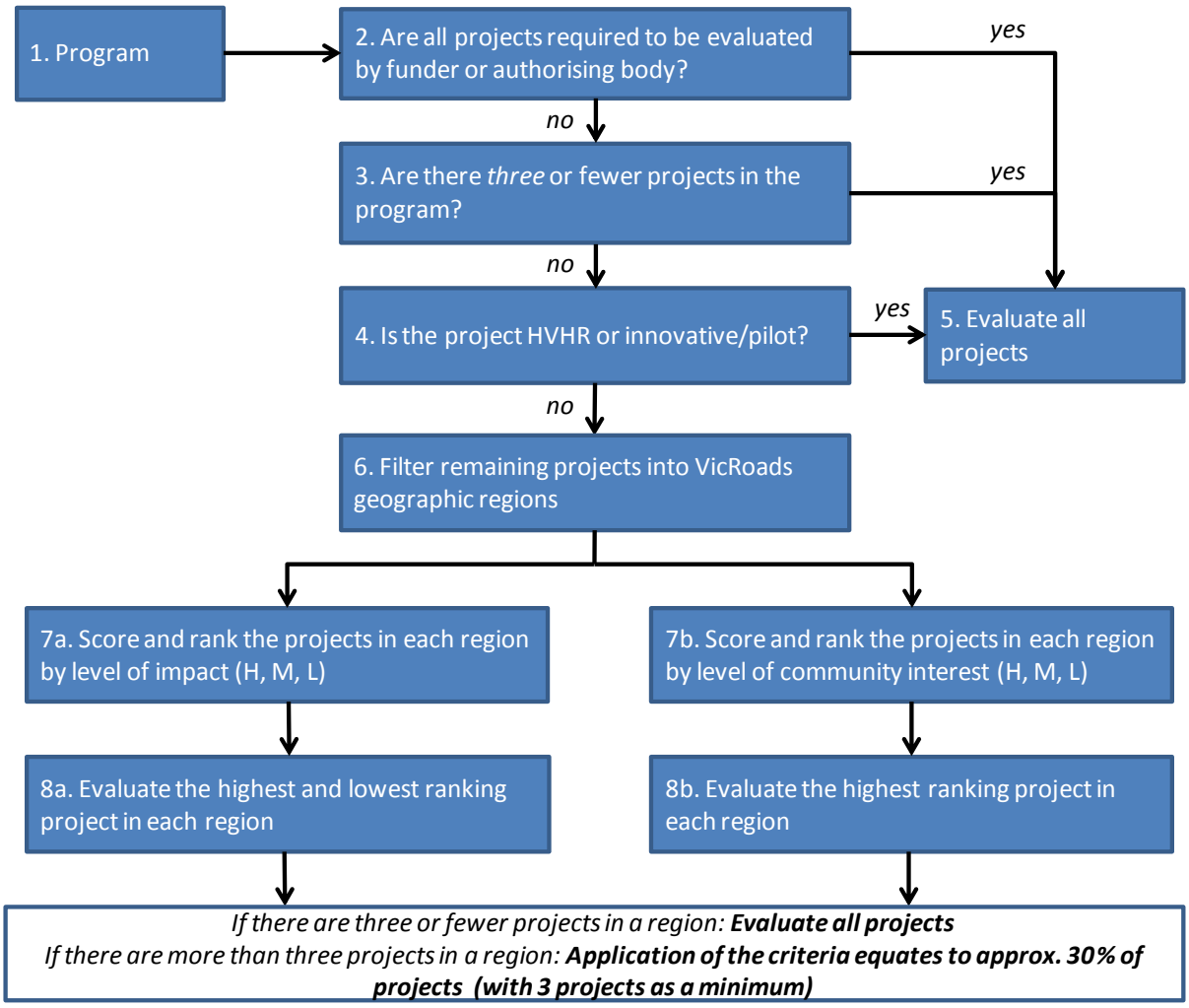

Figure 7: Project Selection Process

Element of overall selection process	Details
1. Program	• A program consists of various projects. • All programs in VicRoads will be evaluated.
2. Are all projects required to be evaluated by funder or authorising body?	• The funder or authorising body may choose to evaluate all of the projects in the program. • If the funder or authorising body does not choose to evaluate all the projects in the program, then projects will need to be selected for evaluation.
3. Are there three or fewer projects in the program?	• If a program consists of three or fewer projects, all projects should be evaluated. This is the minimum number of projects to evaluate in a program.

4. Is the project HVHR or innovative/pilot	• If a project (either standalone or in a program) is high value or high risk (HVHR), it should be selected for evaluation.
	• High value projects are those which have a total estimated investment (TEI) of greater than $100 million (regardless of the funding source).
	• High risk projects are those which have been identified as high risk using an approved risk assessment tool.
	• Projects which are determined by the Government as warranting the rigour or increased oversight are also considered HVHR.
	• An innovative/pilot project is defined as one which includes the following:
	  ○ a new/different treatment (i.e. one which has never been implemented previously)
	  ○ a treatment that is being used in a new/different way.

5. Evaluate all projects	• If the answer to questions 2, 3 or 4 is a yes then all projects should be evaluated that meet those conditions.
6. Filter remaining projects into VicRoads geographic region	• A decision will need to be made as to which of the remaining projects to evaluate. • The remaining projects need to be filtered into each of the seven VicRoads geographic regions to provide a cross section of evaluations across Victoria.
7a. Score and rank the projects in each region by level of impact (H, M, L)	• Each project within each of the geographic region groups needs to be given a score to rank the level of impact that the project is expected to have. • A score of 5 (high), 4, 3 (medium), 2 or 1 (low) will be awarded to each project, with a score of 5 representing a high level of impact and 1 representing a low level of impact. • A ranking list of all projects within each region can then be developed, which shows the likely level of impact each project has from highest to lowest.
7b. Score and rank the projects in each region by level of community interest (H, M, L)	• Each project within each of the geographic region groups needs to be given a score to rank the level of community interest that the project is expected to have. • A score of 5 (high), 4, 3 (medium), 2 or 1 (low) will be awarded to each project, with a score of 5 representing a high level of community interest and 1 representing a low level of community interest. • A ranking list of all projects within each region can then be developed, which shows the likely level of community interest each project has from highest to lowest.
8a. Evaluate the highest and lowest ranking project in each region, based on level of impact ratings	• The highest and lowest ranking projects in each region will be selected to provide a sample of projects to be evaluated that represent a high and low level of impact.
8b. Evaluate the highest ranking project in each region, based on level of community interest ratings	• The highest ranking projects in each region, based on the level of community interest will be selected for evaluation as it may not be practical to evaluate all projects. • If required, the lowest ranking project in each region can also be selected for evaluation. • If the total number of projects in each region comes to 3 or less then evaluate all. If the number is more than 3 then slection would equate to approximately 30% of the total number (with 3 projects as a minimum) to be evaluated.

Table 6: Elements of Selection Process

Note: In some cases the same project may rank highest for level of impact and level of community interest.

5.1.1 Scoring and ranking projects

Projects in each region should be given a score between 1 and 5 for each of the following criteria:

- **Level of Impact**
  The level of impact can be defined as the extent of the benefit that a project generates. The level of impact can be gauged from the Benefit Management Plan from each project.
- **Community Interest**
  The level of community interest can be determined based on:
  1. **The level of community support for or opposition to** a particular project. Community support/opposition may be represented by the formation of a community interest group participating in organised campaigns (community meetings, protests, marches, etc), or by individual enquiries made to VicRoads (emails, phone calls, ETS, letters, etc).
  2. **The extent/frequency of media coverage** provided (i.e. state-wide or local) to a particular project. Media coverage can be in many forms. Some examples include television coverage, newsletters, newspapers, social media or radio.

After the projects have been scored, they should then be ranked from highest score to lowest within each region. Guidance of how to undertake the scoring is provided in Table 7a and Table 7b.

The highest and lowest ranked projects in each region for the level of impact criterion should be selected for evaluation. The highest ranked project in each group for the level of community interest should also be selected for evaluation.

If the total number of projects in each region comes to 3 or less then evaluate all. If the number is more than 3 then evaluate 30% of the total number (with 3 projects as a minimum).

Score	Level of impact
1	Low level of impact
2	Low-moderate level of impact
3	Moderate level of impact
4	Moderate-high level of impact
5	High level of impact

Table 7a: Scoring Projects on Level of Impact

Score	Community interest
1	• No media coverage • No community interest groups • Minimal enquiries
2	• Local media coverage • No community interest groups • Multiple enquiries per year
3	• Local media coverage on multiple occasions • Small community interest group with minimal organised campaigns • Enquiries made on a bi-monthly basis
4	• State-wide media coverage • Ongoing community interest group with regular organised campaigns • Enquiries made on a monthly basis

Score	Community interest
5	• State-wide media coverage on multiple occasions • Large community interest group with regular organised campaigns attracting media attention • Enquiries made on a weekly basis

Table 7b: Scoring Projects on Community Interest

5.2 Key Evaluation Questions

A post completion evaluation should confirm whether the project/program achieved what it was expected to achieve and, if not, what factors may have affected the intended results. Evaluations also need to consider what other changes may have occurred as a result of the investment. Typically, key evaluation questions (KEQs) are used in evaluations to guide and frame an evaluative enquiry that helps to answer these questions. The KEQs also ensure efficient use of resource for data/information collection that is important for the evaluation.

To provide a consistent approach to evaluation in VicRoads, every program and project will be evaluated against the five key evaluation questions listed below. (**The level of detail provided for each KEQ may differ depending on the size and complexity of the project and the purpose of evaluation**). The KEQs include:

- **KEQ1 (Appropriateness).** To what extent was the planning, design and delivery of the investment the most appropriate way to address the problem?
- **KEQ2 (Efficiency**). How efficient have we been in delivering the investment?
- **KEQ3 (Effectiveness)**. How effective has the investment been in delivering the expected benefits and outcomes?
- **KEQ4 (Unintended Outcomes)**. What are the unintended outcomes of the investment?
- **KEQ5 (Impact Sustainability)**. To what extent are the benefits achieved likely to endure beyond the timeframe of the project/program?

The purpose of the KEQs is demonstrated in the diagram presented in Figure 8, which shows how each KEQ is related to each of the elements of a project (i.e. inputs, activities, benefits and outcomes). In general, KEQ1 and KEQ2 focus on the process aspect of the evaluation and KEQ3, KEQ 4 and KEQ 5 focus on the outcome aspect of the evaluation.

A description of each KEQ, along with specific considerations which are to be included in the response for each KEQ and guidance on how to apply these KEQs is given in Section 9.

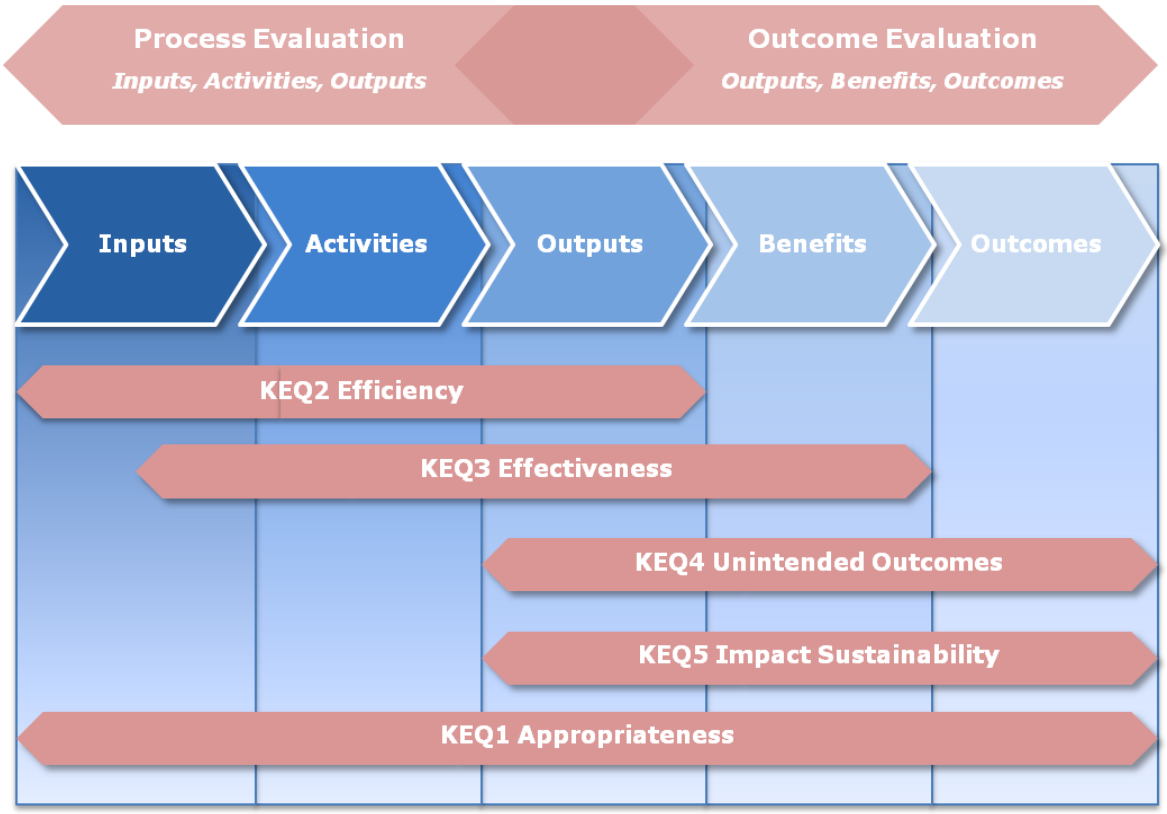

Figure 8: Purpose of Key Evaluation Questions

6. When to Undertake Post Completion Evaluations

6.1 Initial post completion evaluation

For all programs and projects selected, a post completion evaluation should generally be undertaken a minimum of 12 months after project completion to allow for the benefits of projects to manifest, taking seasonal variations into consideration (Austroads, 2005, VicRoads, 2013c).

6.1.1 Initial post completion evaluation of staged projects

In many cases large projects may be implemented in stages and sections of the road may be open for use before all stages are completed. In such cases, post completion evaluations can either be undertaken after the completion of the individual stage or after the completion of the whole project. The following factors need to be considered in determining when the evaluation of each stage should be undertaken.

Whole or multiple stages of the projects can be evaluated together if:

- there has been enough time lapsed after project completion (approximately 12 months) for the benefits of all stages to be realised
- there is no significant gap in timing between the completion of any two stages
- there is no urgency to use the evidence (of the benefit realisation) and/or learnings from one stage to influence the development or delivery of other stages.

Evaluation of individual stages can be undertaken when:

- there has been enough time lapsed after project completion (usually 12 months) for the benefits of that individual stage to be realised
- there is a reasonable time difference in the completion of subsequent stages
- the benefits of that stage are not affected or dependent on the completion of the next stages
- there is a need to use the evidence (of the benefit realisation) and/or learnings from one stage to influence the development or delivery of other stages

6.2 Further post completion evaluations

A further post completion evaluation may be necessary in cases where targets set as in Section 8, are to be achieved at a date later than 12 months after completion. The time period in which the benefit is expected to be achieved should be nominated in the BMP, and targets should be set as a measurable, time-bound statement of what the initiative ultimately aims to achieve. Clear statements on timeframes in the BMP will thereby indicate a suitable timeframe for further post completion evaluation to be undertaken.

The initial post completion evaluation report should also identify if there are any benefits that should be re-evaluated, and recommend a further post completion evaluation. For instance, a further evaluation may be beneficial to check if benefits are sustained over time, e.g. travel times and delays (transport network efficiency) may decrease initially, but may not be sustained over a longer period of time. As such, it is recommended that a further post completion evaluation be completed five years following the full project completion.

If a further post completion evaluation is undertaken, it is suggested that only KEQ3 (achievement of outcomes and benefits) will need to be revisited, with a focus on relevant benefits only.

It is recommended that projects of state and national significance be evaluated again after 5 years to measure the sustained impact of the project.

7. Identifying who will undertake Post Completion Evaluations

When identifying who will undertake the post completion evaluation, the following should be considered:

- **Level of independence:** A key consideration at the planning stage of the post completion evaluation is the level of independence required in the evaluation. For instance, evaluations that are conducted to demonstrate accountability often need a higher degree of independence in order to maintain credibility and neutrality (as far as possible).
- **Avoiding bias:** To avoid positive bias, post completion evaluations should generally not be conducted by the same group or person who plans or delivers the project/program. However it is not necessary for the evaluator to be external to the department or government. The evaluator could be someone who is capable and competent, but simply external to direct involvement in the planning and delivery of the project/program (DTF, 2011) being evaluated. In other instances, such as when an evaluation is being conducted for learning and development purposes, project/program staff can be closely involved in the post completion evaluation including at the planning, implementation and review stages of the evaluation.
- **Team composition:** The evaluation team may be comprised of internal and external evaluators[3]. Internal evaluators bring a deeper understanding of the project/program and would allow for organisational learning. Conversely, external evaluators provide increased credibility (DTF, 2005).

An Evaluation Scope should be developed to assist those who will be undertaking post completion evaluations. The Evaluation Scope outlines the background, purpose, scope and governance for the evaluation, as well as the required resources and timeframes, and is used to guide the evaluation including the development of any formal requests for quotations (RFQ) if required. Guidance on how to develop an Evaluation Scope is provided in Appendix Two and a Post Completion Evaluation Scope Template can be found in Quickdocs (QD 2446970). Refer to VicRoads Procurement literature for further information on the RFQ process.

[3] The evaluator is the individual or team who leads the evaluation, not the stakeholders who also provide input into an evaluation process.

7.1 Hiring an External Evaluation Consultant

In certain situations, it may be more appropriate to hire an evaluator that is external to VicRoads. In general, an external evaluation consultant should be used when:

- The scope and complexity of the post completion evaluation requires specific skills and expertise;
- A higher level of independence and impartiality is required;
- Time and/or resources are scarce or;
- It is required by the funder

Refer to Appendix Three for guidance on selecting an external evaluation consultant.

8. Planning for Post Completion Evaluations

Post completion evaluations need to be planned, prioritised and resources committed to during the project/program development stage. The evaluation scope template (QD 2446970) is a key tool to help plan for post completion evaluations. The template has been designed to ensure all evaluations respond to the five KEQs listed on page 30 of this framework.

In designing the evaluation scope individuals should refer to the evaluation principles listed in Section3 and the stakeholder needs identified in Section 4. This section provides further information on how to use IMA outputs in planning for evaluations.

8.1 Planning for post completion evaluations using IMA outputs

At the planning stage of the investment cycle, the IMA plays a critical role in defining the problem; identifying resulting benefits of addressing those problems as well as determining what activities, assets and resources are required to address the problem. As such, the Investment Logic Map (ILM) and the Benefit Management Plan (BMP) provide a logic and rationale for the investment, and help to identify the outcomes, benefits, measures and targets to use in the post completion evaluation. These two outputs along with the Investment Concept Brief (ICB) can be useful sources of information to assist in responding to many of the KEQs. The KEQs and the IMA outputs which can be used to respond to them are shown in Table 8, while Figure 9 illustrates how the IMA outputs can be mapped to the KEQs. More details about the ILM and BMP are provided in the following sub-sections.

KEQ	Description of KEQ	IMA output
Appropriateness (KEQ1)	Considers whether the investment was planned, designed and delivered in the most appropriate way to address the problem.	ILM, ICB
Efficiency (KEQ2)	Concerned with how well outputs are produced by inputs and resources used (Austroads, 1998).	ILM, ICB
Effectiveness (KEQ3)	Effectiveness indicates how well benefits or outcomes are achieved by the given outputs (Austroads, 1998). This section also uncovers efficacy which is confirming the cost/resource effectiveness.	ILM, BMP
Unintended outcomes (KEQ4)	Considers all benefits and disbenefits that have been brought about through investment that were not otherwise expected and planned for.	ILM, BMP, ICB
Impact Sustainability (KEQ5)	Is concerned with the ongoing benefits and/or disbenefits that are sustained from a project or program following completion.	BMP

Table 8: KEQ linked to IMA outputs

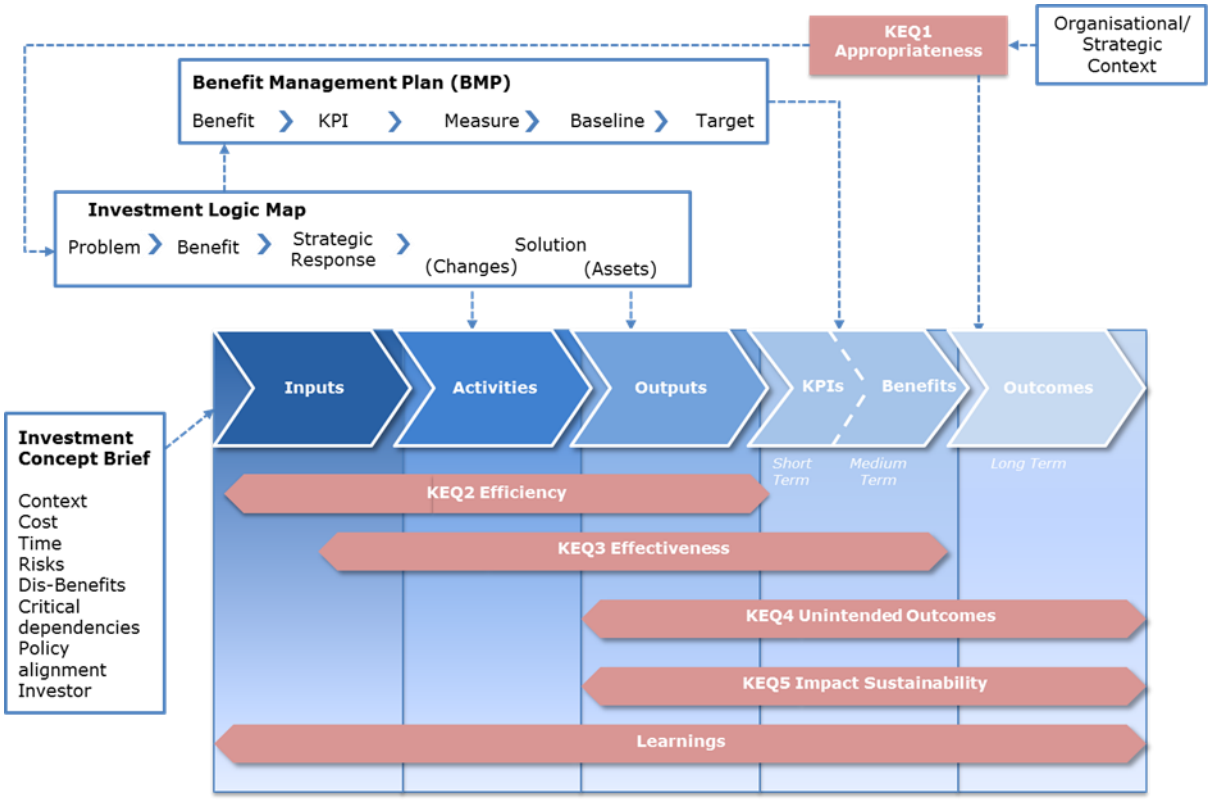

Figure 9: Relationship between ILM, BMP, ICB and KEQs

It should be noted that while government funders (DTF and IA) require the development of Investment Logic Maps for investment planning and evaluation, there are a range of other models commonly used by evaluators including 'theory of change' and 'program logic'. The diagram above also incorporates a program logic model – consisting of inputs, outputs and outcomes – to illustrate the linkages between ILM, BMP, KEQs and program logic.

Where a project or program was not planned using the IMA it may be appropriate to retrofit a number of IMA outputs in order to undertake a post completion evaluation. Retrofitting an ILM and BMP will allow evaluators to understand the problem the investment was intended to address, the benefits it expected to gain and what indicators can be used in order to measure the achievement of these benefits. Where an ILM and/or BMP is prepared retrospectively it should be written as it would have been before the investment was made (i.e. based on the problems that existed before the project was built).

8.1.1 Investment Logic Map (ILM)

The purpose of Stage 1 in the DTF Investment Lifecycle, 'conceptualise', is to confirm the need for an investment. At this stage, the problem being addressed (by the investment) is defined and validated, and the benefits likely to result from addressing the problem are identified. Together, this information, with appropriate interventions (and necessary activities and assets to deliver those interventions) is summarised in an ILM which is developed through a series of facilitated workshops with investment stakeholders. ILMs are a key output and product of the IMA process and include the following five elements (see Appendix Four):

- Problems
- Benefits
- Interventions
- Changes (activities)
- Enabling assets (expected outputs).

These components are developed sequentially in the ILM process which takes a structured approach to the identification and proportioning of specific *benefits* that may be attributed to an investment.

8.1.2 Benefit Management Plan (BMP)

Benefit management planning is the second stage in the IMA process. BMPs illustrate the typical benefits, indicators, measures and targets that the organisation commits to deliver on (see Appendix Five). BMPs are additionally used to monitor the realisation of those benefits over time.

In general, the benefits in the BMP will match the benefits in the ILM, and for each benefit the following information is provided:

- Key Performance Indicators (KPIs)
- Performance measures
- Baselines
- Targets
- Sources of data that will be used to measure KPIs
- Reporting arrangements.

8.1.3 Investment Concept Brief (ICB)

An Investment Concept Brief (ICB) depicts the logic underpinning an investment (DTF, 2013a). It is a two-page document that is used to summarise the merits of an investment through identifying the likely costs, time, risks, disbenefits, dependencies, policy alignments, investors and deliverables of the project/program. This document is produced in the Solution Definition Workshop and is part of the strategic assessment (see Appendix Six).

8.2 Identifying Outcomes, Benefits and Targets with IMA Outputs

The KEQ3 (Effectiveness) is focused on assessing the benefits of the project. This section outlines how two of the key IMA tools (i.e. ILMs and BMPs) can be used to identify the outcomes and benefits of a project, and how together with the Benefit Management Framework (BMF), indicators, measures and targets for each benefit can also be identified.

In general, the following steps will be required:

- Match benefits from the ILM to benefits from the BMP
- Identify the outcome for each benefit from the BMF
- Identify the indicators for each benefit
- Identify the measures for each indicator
- Identify targets or performance expectations for each measure.

8.2.1 Benefit Management Framework (BMF)

To support the development of BMPs, VicRoads Policy and Programs (P&P) has developed a BMF to provide a consistent approach to evaluating the success of investments. The BMF provides a tool to help identify appropriate benefits and key performance indicators of a project and shows how a specific project (investment) can contribute to VicRoads objectives and strategic priorities. These directly feed into the BMP.

A diagrammatic representation of the BMF is shown in Figure 10, where the outer circle depicts benefits VicRoads is seeking from investments, and the inner circle depicts related Victorian Government outcomes. In this way, for every benefit identified in the BMP and ILM, the related outcome can be identified, these outcomes being one of the following:

- Road Safety
- Community health and wellbeing
- Productivity and economic growth
- Better value for money
- Environmental sustainability

Figure 10: Benefit Management Framework

8.2.2 Indicators and measures

The BMF links each benefit to specific indicators which subsequently is linked to a number of measures. Indicators reflect the contribution of specific investments to the benefits sought by VicRoads. A range of indicators are outlined in the BMF under each benefit area. According to the BMF, indicators must be relevant, measurable and attributable. For more information on indicators, refer to the BMF (QD 1095952). Figure 11 provides an example of the BMF for Community Health and Wellbeing, and what indicators are linked to each benefit.

Measures sit underneath each indicator. Measures are specific criteria that are determined by an instrument (i.e. such as a survey) to contribute to an indicator. One or more measures may be used for one indicator as shown in the example of Community Health and Wellbeing in Table 9. For more information on measures, refer to the BMF (VicRoads, 2012a). KPIs and measures are also outlined for individual programs in the Roads Programs Guidelines.

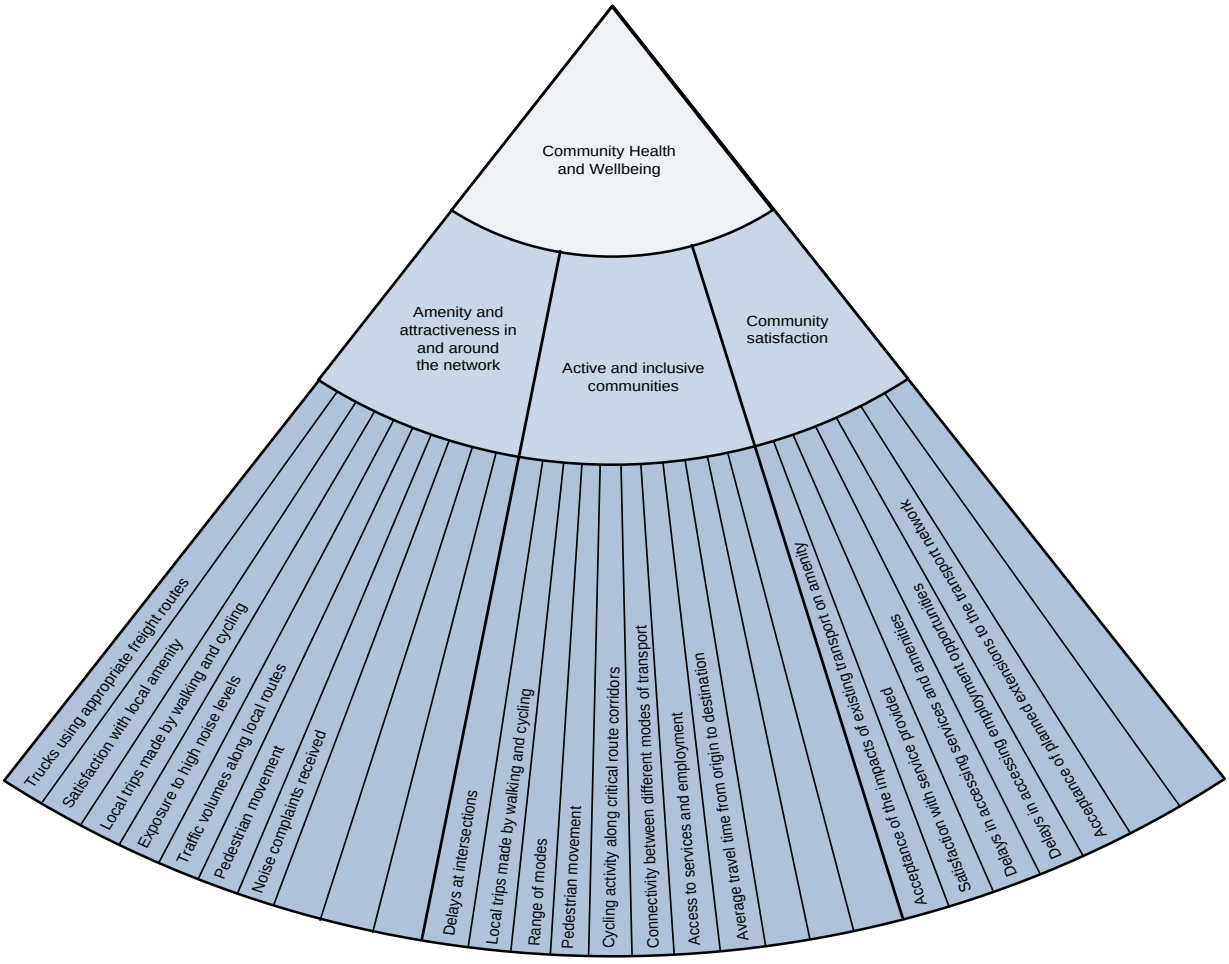

Figure 11: Benefit Management (Community Health and Wellbeing)

Indicator	Measures
Access to services and employment	- % of population within a given number of minutes of services and employment - Average time to access activities and services from different locations - ARRB accessibility metrics (by number of opportunities accessible within a certain time by different modes)

Table 9: Example indicators and measures for Community Health and Wellbeing

8.2.3 Measuring Performance Expectations

Targets for individual projects

A target is a "specified objective that indicates the number, timing and location which is to be realised for a policy, program or activity" (IFAD, 2002). Setting targets is an important step when it is necessary to make an evaluative judgement on the quality, value and/or significance of a project or program.

While the BMF will assist Program and Project Developers to understand what benefits will be delivered during the course of a project and how much, it does not indicate whether this is good enough or how much of a benefit is required in order for performance to be evaluated or judged as 'effective', 'sufficient' or 'good' etc. As such, targets are usually set on a program and/or project basis and are often determined during ILM and BMP stage/s where they can be set at the outcome, benefit or indicator level/s. In all cases, targets should be set as a measurable, time-bound statement of what the initiative ultimately aims to achieve.

Targets may also include a quantitative range (for example, being within +/- 10% of target value meets the target), which will depend on the type of benefit it is related to.

Targets for long corridors

It should be noted that setting overall KPIs and targets for a long corridor project which consists of multiple shorter corridor sections, may not give a true reflection of the benefits achieved. For example, some sections of the corridor may perform very well, while others may not. In such a case, if overall KPIs and targets are set, sections which perform well, may go unnoticed. As such, for long corridor projects, it is recommended that where possible, in the BMP, along with overall KPIs and targets, individual targets are also set for smaller sections. In this way, a better understanding of the benefits derived in each section may be gained.

Rubrics

Rubrics have not been widely used in the transport sector. Rubrics are an alternate tool to define performance expectations. While targets focus on a specific indicator or outcome, rubrics provide a systematic and transparent way of defining performance expectations according to pre-determined criteria. For instance, as highlighted in Table 16, performance expectations are defined as 'Excellent', 'Good' etc. and are each associated with a set of criteria which together define and describe the level of performance at that expectation level. Where targets use a singular aspect of performance or set of measures, rubrics can accommodate different forms of information including qualitative, quantitative, and mixed methods data. This information can then be analysed and interpreted to determine the level of performance based on evidence collected against the criteria.

Rubrics can be generic (applied across a range of questions/criteria) or criterion-specific (Davidson, 2005) also differentiates between grading and ranking rubrics:

- **Grading** rubrics to determine absolute quality or value (how good performance is in an absolute sense)
- **Ranking** rubrics to determine relative quality or value (how performance compares relative to others).

Rubrics are useful for evaluating projects when a judgement on the *level* of performance is required. This judgement can be absolute or relative depending on the circumstances. In cases where a judgement does not need to be made, rubrics may not be necessary. Rubrics are also suited to evaluating a component or an aspect of a project when there is a range of evidence that may be brought to bear on the sufficiency of performance.

The performance expectations in a rubric are typically set and defined prior to project/program delivery. The use of rubrics has not been well tested in the transport sector. Because of the time involved in developing rubrics, and the range of evidence sources that are typically used, rubrics can also be a time and resource intensive tool. However, their applicability is recognised by evaluators as particularly useful when it is necessary to develop a *comprehensive* assessment of performance when performance cannot easily be measured through quantitative indicators or measures.

9. How to Undertake Post Completion Evaluations

9.1 Responding to KEQs

Post completion evaluations should be designed to address the KEQs (refer to section 5). This section provides guidance on how to respond to each KEQ, and where information and data to use in the responses can be found.

Responses to KEQs will be either quantitative, qualitative or a mixture of both, where:

- **Quantitative** responses involve collecting and analysing measurable data (eg. traffic data).
- **Qualitative** responses involve collecting and analysing descriptions or distinctions based on some quality or characteristic (eg. community surveys).
- **Mixed** responses involve the combination of qualitative and quantitative responses.

In practice, the majority of evaluations will draw on both quantitative and qualitative information to "trade off between breadth and depth" (Frechtling, 2002). Combining these two types of information can provide a more robust response, as the weaknesses of one technique will often be counterbalanced by the strengths of the other. For example, a town bypass project will require the collection and combination of both qualitative and quantitative information to adequately evaluate the project. Surveying the number of trucks using appropriate freight routes (quantitative) will provide indicative and generalised information about amenity improvement in the town that was exposed to a high number of trucks passing through before the bypass treatment. However, this quantitative response does not provide any insight into how the bypass may impact the community. Therefore, conducting surveys/interviews with stakeholders (qualitative) will provide further information on the extent to which the treatment has impacted the local community.
Tables 10 to 14 list each KEQ with their specific considerations, and provide an overview of how to respond to each specific consideration, along with where data can be sourced to generate responses. Specific considerations can be defined as sub-categories within each KEQ to provide further detail to the evaluation of each KEQ.

All the KEQs and specific considerations listed in Tables 10 to 14 are important to every program and project, however it is appreciated that for some programs and projects information and data may not be available to provide an adequate response. As such, where a KEQ or specific consideration cannot be answered for a program or project, clear justification as to why should be provided.

All evaluations should attempt to answer all the five KEQs. The specific considerations are there to assist in answering the 5 KEQs. It is expected that some projects may not have the data to address all specific considerations. Hence, the level of detail for evaluations will be commensurate with the size and complexity of the projects.

KEQ	Specific considerations	How to respond	Data and information
KEQ1 (Appropriateness) To what extent was the planning, design and delivery of the investment the most appropriate way to address the problem? ***Description:*** *Appropriateness concerns the alignment between a project/program and the context in which it is delivered. It focuses on the extent to which a project/program is suited to relevant priorities and needs and/or has addressed the problem it was designed to address.*	**Strategic fit** Strategic fit is concerned with: • The extent to which the project/program aligns with broader VicRoads, Victorian Government and national transport objectives and strategies. • The extent to which the project/program is compliant and consistent with relevant legislation (i.e. Transport Integration Act).	**Qualitative response** • Explain to what extent the project/program align with broader VicRoads, Victorian Government and national transport objectives and strategies. • Explain to what extent the project/program is compliant and consistent with relevant legislation (i.e. Transport Integration Act).	• Transport Integration Act (2010) • Other relevant legislation • Infrastructure Australia Reform and Investment Framework (2012) • Government Strategies • VicRoads Strategic Directions 2012 – 2014 (2013g) • Business Case Reports
	Planning and design Planning and design are concerned with: • What problem is being solved by the program/project, and how it was defined? • How well the program/project solves the problem defined and how it was planned and designed.	**Qualitative response** • Demonstrate that the problem that the project/program was aiming to resolve was justified by sufficient evidence. • Demonstrate how the problem definition and intended program/project benefits were aligned. • Explain how the program/project option, design and treatments were suitable to the problem i.e. explain to what extent the best available advice and information were used to determine the project option, design and treatment and to what extent other options were investigated. • Using evidence explain how well the program/project has addressed the problem identified. (*For lapsing programs, if the problem has not been resolved, demonstrate to what extent the program continues to address a demonstrable need and is responsive to Victorians)* • Explain to what extent the community needs have been addressed by the program/project. • Explain to what extent the program/project has complied with all environmental approvals and planning conditions.	• Business Case Reports • Scope Approval Report • Project Proposal Report • Investment Logic Maps (ILM) • Investment Concept Brief (ICB) • Community surveys • Other data (see section 9.5)

KEQ	Specific considerations	How to respond	Data and information
	Delivery Delivery is concerned with the extent to which the delivery model and process was acceptable to community and the government priorities.	**Qualitative response.** • Explain to what extent the delivery model and process was acceptable to community and the government priorities. • Include any changes to scope, time and cost.	• Business Case Reports • Community surveys • Interview project team • Other data (see section 9.5)
	Learnings Delivery is concerned with the extent to which the delivery model and process was acceptable to community and the government priorities	**Qualitative response**. • Through answering the above specific considerations, identify any opportunities for improvement and key lessons learnt, and suggest recommendations for future programs/projects.	• Project Review Committee reports

Table 10: Responding to KEQ1 (Appropriateness)

KEQ	Specific considerations	How to respond	Data and information for all considerations
KEQ2 (Efficiency) How efficient have we been in delivering the investment? ***Description:*** *Efficiency concerns how well outputs are produced by inputs and resources used (Austroads, 1998).In economic terms, efficiency is concerned with using the least costly resources available in order to achieve the desired results (OECD, 2000)*	**Cost efficiency** Concerned with how cost efficient the project and/or treatments were.	**Mixed response.** • Identify the cost of project activities and/or the overall project and compare with other similar projects. • Explain to what extent the outputs were achieved at cost or the project/program has been delivered at lowest possible cost without compromising quality.	• Post contract review • Business Case Reports • Financial reporting • Financial audit • Management/Progress reporting • Learnings database • Interview program/project managers • Contractor Performance Review • Other data (see Section 9.5)
	Time efficiency Concerned with how time efficient the project and/or treatments were.	**Mixed response.** • Identify the time required to undertake project activities and/or the overall project and compare with other similar projects. • Explain to what extent the outputs were achieved on time.	
	Resource Efficiency • Concerned with how resource efficient the project and/or treatments were in regards to resource use and allocation. • Resources include people, capital and/or systems.	**Mixed response.** • Identify the resources (including people, systems and capital) required to undertake project activities and/or the overall project and compare with other similar projects • To what extent did the availability and efficient utilisation of resources impact the efficiency of the project? • Any changes to scope should be included here.	
	Learnings • Concerned with capturing any opportunities for improvement. • key lessons learnt. • How opportunities can be realised in other programs and projects.	**Qualitative response.** • Through answering the above specific considerations, identify any opportunities for improvement and key lessons learnt, and suggest recommendations for future programs/projects.	

Table 11: Responding to KEQ2 (Efficiency)

KEQ	Specific considerations	How to respond	Data and information for all considerations
KEQ3 (Effectiveness) How effective has the investment been in delivering the expected benefits and outcomes? ***Description:*** *Effectiveness measures the extent to which projects have achieved proposed outcomes (OECD, 2000). Effectiveness indicates how well benefits or outcomes are achieved by the given outputs (Austroads, 1998)*	**Achievement of benefits** Concerned with assessing the benefits achieved compared with what was planned.	**Quantitative response** • Explain to what extent the expected benefits have been achieved using one of the three methods in Sub-section 9.1.	• Business Case Reports • Scope Approval Report • Project Proposal Report • Project Review Committee reports • Investment Concept Brief (ICB) • Investment Logic Maps (ILM) • Benefit Management Plan (BMP) • Interview program/project managers • Community Surveys • Data from VicRoads Data Resource Guide (see Sub-section 9.4.2) • Other data (see Sub-section 9.5)
	Distribution of benefits Concerned with identifying how benefits have been distributed compared with what was planned.	**Quantitative response.** • Identify the relative distribution of benefits and how they compare to that in the ILM. • Comment on how reasonable the distribution of benefits is. • Identify to what extent benefits have changed or been displaced since project/program completion	
	Attribution/ contribution Concerned with how much influence the project/treatment has had on solving the problem and achieving the benefits.	**Qualitative response** • Identify what benefits have been achieved directly from the program/project output (i.e. what benefits have the program/project attributed to?). For example, there would be direct evidence to demonstrate that building a new road has provided greater access to an activity centre. • Identify what benefits have been achieved due to a combination of program/project outputs and other factors (i.e. what benefits have the program/project contributed to?). For example, building a new road is only one contributor to improved job opportunity as jobs may be affected by other business development opportunities in the area.	
	Factors Concerned with factors that have affected the achievement of benefits.	**Qualitative response** • Identify the factors (internal or external) that have enabled or prevented the achievement of benefits. • Identify if there were assumptions made during the benefit setting stage which have affected the expected achievement of benefits.	

KEQ	Specific considerations	How to respond	Data and information for all considerations
	Management (of disbenefits and risks to benefits) Concerned with how well the disbenefits and the risks to benefits, as well as the displacement of benefits, were managed.	**Qualitative response.** • Identify any risks to benefits and how they were managed • Identify any known disbenefits and how they were managed, including through meeting relevant planning and environmental approvals and legislation. • Identify any potential displacement of benefits and how this was managed. • Demonstrate why the governance and risk management practices surrounding the project/program were appropriate. • (*For lapsing programs, identify any significant impacts (both internal or external and direct and indirect) of discontinuing the program if government so desires after completion. List all strategies in place to minimise any negative impacts).*	
	Cost-effectiveness Concerned with how cost-effective the project was.	**Mixed response.** • Identify the cost of the program/project. Identify a project which has achieved a similar outcome and compare the cost.	
	Efficacy Concerned with the level of benefits realised given the resource input that may apply. In other words the cost/resource effectiveness of the total planning and project delivery process (Austroads, 1998).	**Quantitative response.** • Explain to what extent the project/program delivered the intended value per given input (first year operated BCR). This will generally be applicable to HVHR projects.	
	Learnings • Opportunities for improvement. • Key lessons learnt. • How opportunities can be realised in other programs and projects.	**Qualitative response**. • Through answering the above specific considerations, identify any opportunities for improvement and key lessons learnt, and suggest recommendations for future programs/projects.	

Table 12: Responding to KEQ3 (Effectiveness)

KEQ	Specific considerations	How to respond	Data and information for all considerations
KEQ4 (Unintended Outcomes) What are the unintended outcomes of the investment? ***Description:*** *Unintended outcomes consider all benefits and disbenefits that have been brought about through investment that were not otherwise expected and planned for. In the transport context this includes unexpected changes to service demand and displacement of effects that have been brought about through the project/program.*	**Unintended benefits** Unintended benefits are benefits which were not planned for, but have occurred as a result of the project.	**Mixed response.** • Identify any benefits that were not considered during the planning stage. • Use data to support findings where possible.	• Learnings database • Community surveys • Interview program/project managers • Data from VicRoads Data Resource Guide (see Sub-section 9.4.2) • Other data (see Sub-section 9.5)
	Unintended disbenefits Unintended disbenefits are disbenefits which were not considered or managed, but have occurred as a result of the project.	**Mixed response**. • Identify any disbenefits that were not considered during the planning stage. • Use data to support findings where possible.	
	Learnings • Opportunities for improvement. • Key lessons learnt. • How opportunities can be realised in other programs and projects.	**Qualitative response** • Through answering the above specific considerations, identify any opportunities for improvement and key lessons learnt, and suggest recommendations for future programs/projects.	

Table 13: Responding to KEQ4 (Unintended outcomes)

KEQ	Specific considerations	How to respond	Data and information for all considerations
KEQ5 (Impact Sustainability) To what extend are the benefits achieved likely to endure beyond the timeframe of the project/program? ***Description:*** *Impact Sustainability is concerned with the ongoing benefits and/or disbenefits that are delivered from a project/program following completion.*	**Likely sustained impact** Predicting how long benefits will last.	**Mixed response.** • Based on the benefits achieved 12 months after program/project completion, and through research on similar projects, explain how long program/project benefits are likely to last. • Identify if the indicators (real or proxies) are aligned with the expected trend. • Identify major factors which may sustain or erode program/project benefits over time.	• Case studies from learnings data base • Interview program/project managers.
	Actual sustained impact* Concerned with understanding how benefits have changed over a longer time period (eg 5 years) after program/project completion.	**Mixed response.** • Identify if there are/which benefits that should be re-evaluated in five years' time. For instance, a further evaluation may be beneficial to check if benefits are sustained over time, e.g. travel times and delays (transport network efficiency) may decrease initially, but may not be sustained over a longer period of time.	
	Learnings • Opportunities for improvement. • Key lessons learnt. • How opportunities can be realised in other programs and projects.	**Qualitative response** • Through answering the above specific considerations, identify any opportunities for improvement and key lessons learnt, and suggest recommendations for future programs/projects.	

Table 14: Responding to KEQ5 (Impact Sustainability)

**If a further evaluation is recommended, only specific consideration 'achievement of benefits' under KEQ3 (Effectiveness) will need to be revisited.*

9.2 Evaluation methods to use when assessing effectiveness (benefits)

Responses for most of the specific considerations within each KEQ will generally be qualitative, with information coming from project/program documents (including IMA outputs) or interviews.

The response to the specific consideration 'achievement of benefits', under KEQ3 (Effectiveness) however, will generally be quantitative and will usually require collecting traffic data about the project/program, and analysing the data to determine if stated benefits have been achieved.

Austroads Guide to Project Evaluation Part 7 Chapter 4.3 (i.e. Post completion Evaluation, Methods of evaluation) identifies methods which can be used to determine how effective a project has been in meeting its stated benefits. In general these methods include comparing a without and with project case by:

- Comparing indicators at different points in time
- Comparing indicators of different geographic regions.

Austroads Part 7 Chapter 4.3 also mentions that in some cases, the achievement of stated benefits can also be determined by comparing the real benefits to benefits predicted using traffic modelling. These three evaluation methods are further discussed below. These methods may also be used to support the identification of unintended benefits and disbenefits. For other common evaluation methods used to collect data, refer to Appendix Seven.

9.2.1 Comparing indicators at different points in time

Indicators for certain benefits (as discussed in Section 8.2.2), are measured before and after project implementation (i.e. without and with project, respectively) and compared. For example, travel times on a section of road to be upgraded are measured and recorded before the upgrade, and then after the upgrade. The two travel times can then be compared to identify if the set target is achieved (e.g. reduction in travel time by 10%).

Comparing point in time is the preferred method for all evaluations, as before project data should always be collected during the project planning stage. This method also provides a greater level of confidence in 'attribution'.

9.2.2 Comparing indicators of different geographic regions

In cases where before project data has not and/or cannot be collected, the without project case may be considered to be any region with similar features as the project site that has not been subjected to a similar project (i.e. a comparative site). In this way, indicators for certain benefits (as discussed in Section 8.2.2) can be measured for the comparative site and the project site at the same time (i.e. without project and with project, respectively) and compared. For example, bus delays at an intersection which has been upgraded with bus priority lanes can be compared to an intersection of similar volumes which does not contain bus priority lanes. The two delay times can then be compared to identify if the set target is achieved (e.g. reduction in delays to buses by 10%).

9.2.3 Comparing Real and Predicted Benefits

Often traffic modelling may be undertaken to develop data and inputs for benefit cost analysis at the appraisal stage. In such a case, certain benefits that have been predicted through the modelling may be compared to actual benefits achieved. For example, predicted vehicle throughput for an intersection upgrade, calculated from traffic modelling before project implementation, can be compared to actual vehicle throughput after implementation. Both vehicle throughputs can then be compared to determine if the project has achieved its expected benefit.

It should be noted that traffic modelling outputs are useful in post completion evaluations if they were intended to be used for this purpose. If traffic modelling is intended to be the data source for later comparison, suitable benefits information (i.e. indicators, measures and timeframes) would need to be reported at the BMP stage. On the other hand, traffic modelling outputs that were not intended for use in later evaluations are not suitable for use in post completion evaluations.

9.3 Determining effectiveness (benefits) of individual treatments

Some projects may consist of a suite of treatments within a large project, for example where road widening and introducing a Freeway Management Systems (FMS) are completed as part of the same project. In such a case, it can be difficult to attribute the resulting benefits, or portion of benefits, to specific treatments in a before-after evaluation. Evaluating separate treatments would however, result in a better understanding of the benefits derived from each individual treatment. It would also provide information on the benefit of investment.

The most suitable method for evaluating individual treatments would be to compare different geographic locations, for example, compare a site where FMS and widening was done with a site where only widening was done. This would show the benefit attributable to the FMS. For this type of evaluation to be successful, suitable KPIs and targets should be set at the BMP stage and a suitable comparison site should also be identified.

Another method for evaluating results for separate treatments would be to isolate the individual treatments. For example, evaluation data on a project with road widening and FMS could be collected before FMS was activated. Alternatively, FMS could be turned off temporarily to evaluate its benefit. It is noted isolating treatments in this way could still cause difficulties for evaluation if traffic behaviours were not settled.

9.4 Measuring the impact of investments on network performance

There is a need to understand the level impact investments are making at a network and statewide level. There are various methodologies available across the sector that can help to demonstrate these impacts. These include:

- aggregating the benefits achieved (at an investment level) from similar projects/programs and extrapolating them to demonstrate their contribution to the network level change
- using traffic modelling to gauge what network performance would be like without the project/s under consideration.

However, these methodologies can only be applied to determining the impact of a suite of projects or projects of State and National significance. The level of benefits achieved by smaller projects may not be significant enough to demonstrate an impact at the network level. Further work needs to be done to determine the best methodology for use in VicRoads.

9.5 Guidance on accessing traffic data for benefit evaluation

9.5.1 Data Collection

As indicated in Section 9.1, to assess some of the benefits of a particular project or program, before and after data may need to be compared. The data (both before and after) to be collected for a particular project or program, should be determined as part of the BMP and should be planned prior to the undertaking of the project or program. As VicRoads collects and stores a wide range of data, planning for evaluations at project development stage ensures that the data collection process is most efficient by limiting the data collected to only what is needed. For before project data collection, any existing data should be considered as a first point of call before determining any new data collection requirements. This ensures that data collection is not duplicated or unnecessarily collected. Furthermore, it is important that data collection be linked to a specific question (i.e. KEQ) that needs to be answered.

"**Data should only be collected to enable the evaluator to answer the key evaluation questions**".

9.5.2 Data Resource Guide

VicRoads collects and stores a wide range of data which may be used to respond to the specific consideration 'achievement of benefits', under KEQ3 (Effectiveness), and KEQ4 (Unintended Outcomes).

The types of data available are summarised in the Data Resource Guide (VicRoads, 2012b) which provides guidance on data access, storage and use within VicRoads. The Data Resource Guide specifically supports the BMF by outlining and identifying data sources and measures for benefits and indicators outlined in the BMF, which then supports the development of individual BMPs.
Data sources outlined in the Data Resource Guide are shown in Table 15 below.

Data source	Description
Traffic Stats	Databases and analysis tools for traffic information including volumes, speeds, congestion, travel time and delay. Data sources include Freeway Monitoring Sites, Telemetry Sites, Manual Observation Sites, Floating Car Surveys, Sydney Coordinated Adaptive Traffic System (SCATS) and Bicycle Count Sites.
Road Crash Information System (RCIS)	Captures road crash information for use in monitoring and analysis of road crash trends. The RCIS database collects data on accidents (time, location, environment), vehicle (make, model and registration), and person (injury severity, age and sex).
Spatial Data	Spatial data is collected and stored in a range of formats by VicRoads. Spatial data management systems include back-end servers (The Connect – Location Reference System [LRS] and the Spatial Data Engine) and front-end databases (Connect – MAPS Geographic Information System and the Geoportal search engine).
ABS Data	VicRoads collects and maintains a sub-set of data collected by the ABS including Census data.
VISTA & VATS[4] Data	VISTA/VATS are a data set collected by the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) on travel behaviour based on an extensive survey of metropolitan and regional Victoria. VISTA/VATS data is not representative for all regions in Victoria.
Victorian Integrated Transport Model (VITM)	Maintained by DEDJTR, the VITM is a strategic transport demand model which can be used to forecast changes in travel by private vehicles and public transport in response to transport infrastructure and land-use planning scenarios.
Public Transport Victoria (PTV) Data	Public transport data is collected by PTV. Principally measuring punctuality and patronage, PTV data includes a number of measures that can be queried spatially for metropolitan and regional areas.

Table 15: Data sources outlined in the Data Resource Guide

9.5.3 Other Data Sources

Community and stakeholder surveys provide useful data to validate the inferences made from traffic data in explaining what the change really meant to the community. Information sourced from literature and existing data from other credible sources such as ABS and other government departments or local government can provide useful input into post completion evaluations. Findings from existing evaluations both within VicRoads and from other jurisdictions can also provide useful information in responding to KEQs.

[4] Victorian Integrated Survey of Travel and Activity (VISTA) has superseded the former Victorian Activity and Travel Survey (VATS).

10. Rating Performance and Analysis

Performance ratings should be provided for every KEQ. In general, all KEQs, except KEQ3 (Effectiveness) should be rated based on rubrics as shown in Table 16. Examples of other rubrics related to each specific consideration are provided in Appendix Eight, and can be used to help determine the performance rating for each KEQ.

For KEQ3 (Effectiveness), if targets have been set for certain benefits, a 'Results Chart' may be used in place of rubrics. An example of a 'Results Chart' is shown in Table 17 below. It should be noted that the 'Results Chart' in Table 17 does not include an overall quantitative range for scores (for example, being within +/- 10% of target value meets the target), as different ranges may be applicable for different types of benefits. As discussed in Section 8.2.3, setting a quantitative range is part of the target setting process. If no range is set, the performance rating for the benefit will need to be subjective and based on sound judgement and clear evidence.

Performance rating	Score	Performance descriptors
Excellent	5	Performance is clearly very strong or exemplary. Any gaps or weaknesses are not significant and are managed effectively.
Good	4	Performance is generally strong. No significant gaps or weaknesses, and less significant gaps or weaknesses are mostly managed effectively.
Adequate (Business as usual)	3	Performance is inconsistent. Some gaps or weaknesses. Meets minimum expectations/ requirements as far as can be determined.
Poor	2	Performance is unacceptably weak. Does not meet minimum expectations/requirements
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

Table 16: Example Rubric

Performance	Score	Description	Results
Fails to deliver benefits	0	Shows a disbenefit; the indicator shows a negative target value for the benefit measure	[Evidence]
Below target	1	Shows some positive benefit but the indicator is below the target value for the benefit measure	[Evidence]
Meets target	3	Shows a good positive benefit; the indicator is close to the target value for the benefit measure	[Evidence]
Exceeds target	5	Shows a strong positive benefit; the indicator is well above the target value for the benefit measure	[Evidence]

Table 17: Example Results Chart

All ratings should be accompanied with a narrative explaining the rating. For example, a rating of 1 (below target) should explain which indicators it is referring to, what was the target and how far was it below the target. The explanation should also accompany what factors may have affected it to be below the target. Similarly, if a rubric was used, it needs to be explained why a certain performance rating was given.

For KEQ 3, it is also advisable to include visual presentation of before and after data. This may be in the form of before and after pictures or other visual presentation that supports the numeric data.

11. Reporting

11.1 Proposed reporting structure

Post completion evaluation reports should use a standardised reporting structure, which can be adapted to suit project requirements. The standardised reporting structure should include the following:

- **Executive summary** outlining the overall findings.
- **Introduction.** Provide information about the project and outlines the purpose of the evaluation.
- **Methodology.** Outline data collected and analysis process used. The methodology should also identify who (all internal and external stakeholders) has been involved in the evaluation.
- **Evaluation findings.** There should be a separate section for each KEQ which includes a how the project rated against each specific consideration in the KEQ, and consequently how the project rated for that KEQ.
- **Overall project performance rating.** The overall performance rating for the project.
- **Summary of key learnings and recommendations.** Summarise key learnings from each KEQ, and identify any improvements that can be made for future programs/projects.
- **Appendices.** Includes any investment logic maps or data collection tools used in the evaluation.

An Evaluation Report Template can be found in Quickdocs (QD 2447759).

11.2 Special reporting requirements

11.2.1 Victorian Government reporting requirements

DTF has a prescribed reporting requirement for all lapsing programs with **output funding** which is set out in the 'Evaluation policy and standards for lapsing programs' (DTF, 2012a). Under the DTF Policy, the following types of 'lapsing' projects and programs with output funding will need to complete an evaluation report:

- Programs with less than $5 million investment that are seeking further funding
- All programs with greater than $5 million investment.

Therefore, for all lapsing programs with **output funding** the 'Evaluation policy and standards for lapsing programs' (DTF, 2012a) should be used to guide the specific requirements of evaluation reporting depending on the type of project implemented.

All lapsing programs with capital funding should use this framework and the proposed Reporting Structure outlined in Section 11.1.

11.2.2 Federal Government reporting requirements

Federal Department of Infrastructure and Regional Development has provided *Notes of Administration for Land Transport Infrastructure Projects* which provides high level guidance on reporting requirements for projects funded under the federal *Nation Building Program.* These requirements are included in the reporting template (QD 2447759), which proponents are encouraged to use.

12. Quality Assurance

Increasing the credibility and transparency of evaluations can be achieved through efficient and effective Quality Assurance (QA) processes. Ensuring that post completion evaluations are of a high quality is more than just complying with VicRoads standards. Quality assurance requires the evaluator/evaluation team to have a rich understanding of the VicRoads approach to evaluations and how this is incorporated throughout the entire investment cycle. Evaluators must also ensure that the final post completion evaluation reports are written in a concise and appropriate way that is meaningful to its intended audience.

In order to achieve this, the following QA measures should be considered:

12.1.1 QA Measures Prior to Conducting Post Completion Evaluation

As part of the Quality Assurance process, it is essential that the evaluator/evaluation team complete the following tasks prior to conducting post completion evaluations:

- Complete the VicRoads Online Evaluation Training. *(in progress)*
- Read the VicRoads Evaluation Framework – Post Completion Evaluation to better understand the concepts and approaches outlined in this document.

12.1.2 QA Measures during the Reporting Stage

Once the draft Post Completion Evaluation Report has been completed, the evaluator/evaluation team should thoroughly review this document using the guidance outlined in the Quality Assurance Criteria Guide provided in Appendix Nine. This Guide outlines the aspects of a Post Completion Evaluation Report that are considered important in achieving a report of high quality.

This review conducted by the evaluator/evaluation team should be assessed by the respective Project Manager before the Post Completion Evaluation Report is finalised.

13. Implementation of Recommendations

Following the completion of the post completion evaluation, it is important to identify how the results will be used by different stakeholders, and therefore how best to disseminate the evaluation findings, which will then lead to improvements. As such, this section outlines the:

- different ways in which evaluation findings may be used;
- methods of disseminating evaluation findings to different stakeholders;
- process for disseminating evaluation findings;
- ways to implement evaluation findings

13.1 How results can be used

As discussed in Section 3, each stakeholder will have different needs, and these needs will determine how they use the results. In general:

- Internal stakeholders need results for accountability, best practice, learning and improvement purposes
- External stakeholders (government agencies) need results for accountability and best practice
- External stakeholders (other agencies and the general public) want results for interest.

Apart from external stakeholders (other agencies and the general public) who may simply just be interested in the evaluation findings, all other stakeholders will use the evaluation findings in one or more of the following ways:

- instrumentally – to make decisions about funding program adjustments or changes in policy and procedures;
- conceptually – to form new ideas and concepts;
- to learn – change behaviour or approach;
- to legitimise – legitimise a decision or understanding.

13.2 Disseminating Results

Based on stakeholder needs and how results will be used, a dissemination strategy should be developed, such that the appropriate information from the post completion evaluation report reaches the appropriate stakeholders.

The dissemination strategy should consider the following:

- Content/length of the report - full report, one page executive summary overview or short program/project sheet
- Format/level of detail - Written or numerical based, more or less visuals (graphs, figures, diagrams, before and after images of a project site, etc).
- Authorisation/method of communication – For example, VicRoads website, Annual Report or bulletins/newsletter.

Table 18 provides some guidance on the dissemination strategy that may be used for internal and external stakeholders.

Stake-holder type	Stakeholder(s)	Stage content/length	Stage format/level of detail	Stage example methods of communication
External	Government agencies that need results for accountability and best practice	One page executive summary overview	Written and numerical based with little visuals	Annual Report
External	Other agencies (e.g. Bicycle Victoria) and toll road operators	One page executive summary overview	Written and numerical based with little visuals	Annual Report
External	General public	Community notice/flyers or brochures	Numerical based with more visuals	VicRoads website
Internal	Internal VicRoads stakeholders who need results for accountability, best practice, learning and improvement purposes	Full report with one page executive summary overview	Written and numerical based with little visuals	VicRoads Intranet or internal presentations

Table 18 Dissemination Strategy

13.3 Process for Disseminating findings

Once the dissemination strategy has been determined, VicRoads will lead the process for disseminating the evaluation findings to key stakeholders. In particular, Project Directors will be responsible for:

- Ensuring that key findings and significant learning reports for all projects of State and National significance, and all other projects that uncover significant findings, are presented to PRC for endorsement (Refer to Appendix One for Evaluation Governance Structure).
- Summarising findings from projects of State and National significance to be included in the Annual Report and communicated on the VicRoads website.

Director Network Programs will be responsible for:

- Ensuring that key findings and significant learning reports for all programs are presented to PRC for endorsement (Refer to Appendix One for Evaluation Governance Structure).
- Reporting key findings from all programs and HVHR projects to the funders to enhance credibility and to demonstrate the worth and value of the investment and as evidence for the success of future projects. This will assist funders when considering future projects.
- Providing guidance and tracking the progress of the evaluations of programs and selected projects.

13.4 Implementing Recommendations

13.4.1 Improving Project Planning and Delivery

Following the dissemination of the evaluation findings, improvements to project planning and delivery can be made in the following ways:

- Adaptive management by individual projects by collecting and using information on project learnings and modifying planning and delivery accordingly.
- From project to project; by collecting and applying information on project learnings from one project to another. Most commonly applied when a pilot or a trial project is conducted.
- At an organisational level; by documenting learnings from one project or a suite of projects which inform the organisational knowledge of a particular mode of delivery or outcomes. This may extend to sharing learnings on an inter-organisational level (i.e. with Austroads), though the primary focus is on potential for organisational development.

13.4.2 Improvements within the investment cycle

As Figure 13 shows, the most common point in the investment cycle at VicRoads that learnings will be documented and applied is between the 'learn' and 'plan' stages. This does not mean that there is no scope for improvement during the investment cycle, but rather that the greatest opportunity for project improvement will be following a post completion evaluation when evaluation findings and recommendations are utilised. For further information on how learning can be applied within the investment cycle refer to the Evaluation Capability Development Plan and the VicRoads Evaluation Toolkit (in progress).

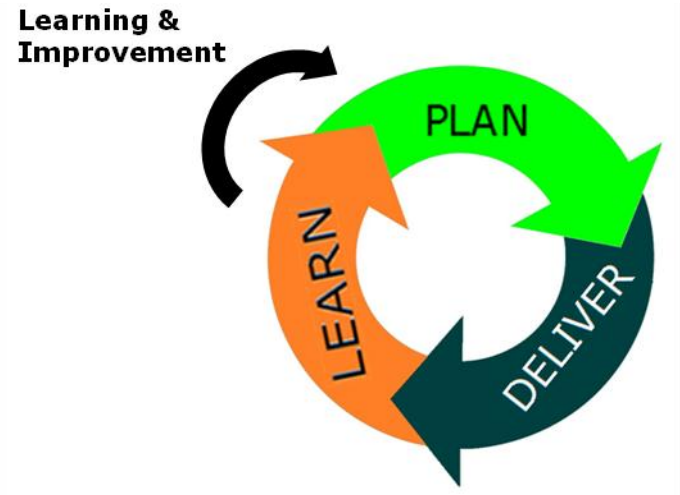

Figure 13: Learning and improvement in the investment cycle

14. Governance and Systems of Support

Like any organisational process, project and program improvement needs to be supported by appropriate institutional structures and governance mechanisms, as well as the necessary systems and capability within the organisation. Both these items are discussed in this section.

14.1 Governance and management support

VicRoads has an established governance structure and management system to support project improvement. In this governance structure the PRC play a key role in project improvement by "review[ing] and endors[ing] recommendations regarding the capture and promotion of lessons learnt from evaluations of existing projects and programs for incorporation into the scope of future initiatives". The Terms of Reference (TOR) for the PRC also states that "evaluations submitted to PRC should provide a significant report on 'lessons learned' together with how the findings are to be disseminated to relevant Business areas" (VicRoads, 2013b).

The VicRoads Management Committee has endorsed post completion evaluations within the VicRoads investment cycle. High level sponsorship is critical in providing the appropriate 'demand' for evaluation outputs and considerable work has been done to establish support for post completion evaluation within VicRoads within the broader investment management approach.

14.2 Systems support

14.2.1 Current systems

The focus of project/program processes and systems to support program improvement within VicRoads is largely on 'delivery'. The following processes and systems are currently being used by VicRoads to support project/program improvement:

- **Project learnings database.** VicRoads have developed a project learnings database which is currently used by major projects in VicRoads. Known as the '*Key Learning* Library', the database can be enhanced used by project/program managers to document learnings during and after project delivery. Organised by categories and work groups, the database can be accessed by project managers to gain practical insights into challenges and learnings documented in the investment cycle.
- **Project learnings reports.** Learnings reports have been prepared using database outputs and through formal and informal review processes undertaken by project managers. Varying in length, scope and format, learnings reports are an existing tool used to document, communicate and apply learnings within VicRoads. Major projects in VicRoads are required to use a formal *Project Review Learnings* template report. Learnings reports summarise findings and highlight major findings, major factors that affected the level of benefits achieved (or not) and recommendations on what can be changed or altered in future delivery.

- **Reflection on progress.** Reflecting on progress is a critical component of learning and improvement within the investment cycle. While this formally occurs at the post completion evaluation stage of major projects, there are considerable opportunities to integrate and embed progress reflection into the existing investment cycle. A common format used to reflect on project and program progress is by: identifying the status of expected deliverables and progress towards outcomes, discuss whether implementation is occurring as planned, determine likely implications for delivery and accordingly address and modify delivery as necessary (see Evaluation Capability Development Plan [in progress] for more detail).

There is an opportunity to develop and enhance these systems to capture and disseminate learnings from post completion evaluations, particularly in focusing on the progress of projects and programs towards delivering benefits and outcomes. Further consultation and collaboration with Operation Services will be conducted to aid the development and enhancement of these dissemination systems.

14.2.2 A New Learning Database

A template for a **Learnings Report on Post Completion Evaluation** is currently being drafted and will enable all significant learnings from post completion evaluations to be provided to the PRC. In future, these reports will be captured in a learnings database.

14.3 Capability building

Supporting the use of post completion evaluations in VicRoads is an Evaluation Capability Development Plan (in progress) which has been developed to assist organisational development in post completion evaluation. This Plan will outline a process and structure for guiding evaluation capability development within VicRoads. For further information on capability building, refer to the Capability Building Plan (in progress).

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Appendices

Appendix One: Governance structure for VicRoads Investment Evaluation

Purpose

To propose a governance structure highlighting appropriate accountability for undertaking investment evaluations and ensuring that the lessons learnt are captured, communicated and incorporated in future decision making.

Background

VicRoads is committed to ongoing improvement to project and program delivery and the measurement of investment outcomes. The Victorian Auditor-General's Office has strongly recommended that outcome evaluations be undertaken for major road projects. This provides an immediate imperative for VicRoads to invest in outcome management and use this as a significant opportunity to improve investment evaluation and promote continuous improvement across the organisation

VicRoads Strategic Directions 2012-14 (2013g) outlines four clear objectives, each with three to four strategic priorities focusing on delivering the best outcomes for the community. The directions need to be supported by clear policies and processes that equip managers to be able to measure the effectiveness of the initiatives that fall out of these priorities and enable a culture of continuous improvement.

The role of P&P is to help translate the Strategic Directions into effective investment opportunities. P&P is also responsible for developing suitable policies and strategies to ensure investments are evaluated and both P&P and Operations are responsible for undertaking evaluations for programs and projects respectively.

To reinforce a learning culture in VicRoads, an active governance structure is proposed to support outcome evaluation and to provide accountability for Business Areas to ensure learnings from the evaluations are captured, communicated and incorporated in future decision making. This document sets out a proposed governance structure for undertaking evaluations and the reporting of learnings from project and program evaluations.

Roles and Responsibilities

Programs – P&P will be responsible for undertaking evaluations of all programs and reporting the learnings to the PRC to ensure the learnings to captured and incorporated into future project/program development.

Program evaluations will be dependent on the evaluations of a sample of projects from within the respective program. As such, the Program managers will need to work with Operations in selecting the projects for evaluation under their programs.

The Outcome Management area within the P&P will be responsible for providing guidance including tools/templates for preparing learnings reports and dissemination plans and for facilitating appropriate capacity building initiatives.

Projects – Operations will be responsible for undertaking evaluations of all relevant projects. Project managers will need to work with Network Programs to determine which projects require evaluations and the level at which these evaluations should be carried out.

Evaluations of all projects of state or national significance will be reported to PRC. For all other projects, it is recommended that where they uncover significant new findings for the organisation they should be reported to the PRC. In business areas, where a number of project evaluations have been undertaken, learnings from these projects can be aggregated and reported together to convey a collective story.

Director Network Programs is responsible for ensuring that evaluations, significant learnings reports and dissemination plans are prepared and presented to PRC for all programs. The Director Network Programs is also responsible for ensuring that appropriate processes and guidance is in place to ensure effective evaluations are conducted and learnings are appropriately disseminated.

Operations directors are responsible for ensuring that evaluations, significant learnings reports and dissemination plans are prepared and presented to PRC for all projects of state or national

significance. Operations directors are also responsible for determining when evaluations of other project should be presented to PRC due to having uncovered significant findings for VicRoads.

Project Review Committee (PRC)

The Terms of Reference (TOR) for PRC (QD 1810335) was endorsed by the Strategic Leadership Team (SLT) in February 2013 which stated a new function of PRC to include: *"Review and endorse recommendations regarding the capture and promotion of lessons learnt from evaluations of existing projects and programs for incorporation into the scope of future initiatives."*

The TOR also stated that: *"PRC endorses investment evaluations of:*

- all programs
- projects of state or national significance
- projects that provide significant lessons to improve future project proposals or provide business improvement opportunities.

Evaluations submitted to PRC should provide a significant report on 'lessons learned' together with how the findings are to be disseminated to relevant Business areas. The Policy and Programs Division is responsible for preparing evaluation reports on programs and the Operations Divisions will be responsible for preparing evaluation reports on individual projects."

An illustration of the proposed governance structure is provided below.

Significant learnings

The learnings report should include the summary findings of the evaluation and highlight:

- Any findings that may reflect a possible change to the scope and TEC of future projects of similar nature
- Uncover factors that may have affected the level of benefits achieved/not achieved
- Recommendation on what needs to change or be reinforced for future project planning (scope) or delivery options.

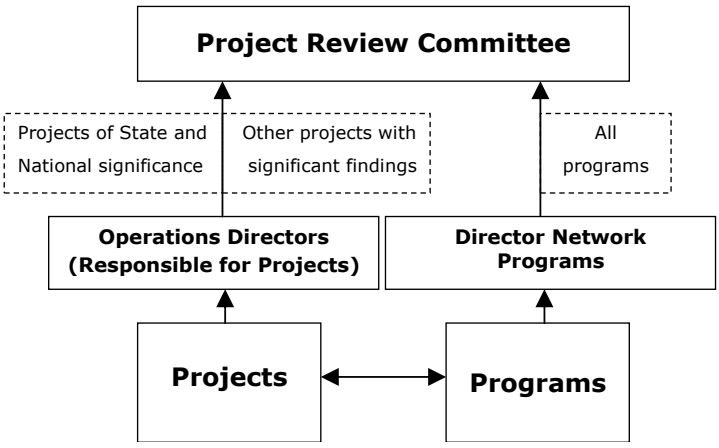


Figure 14: VicRoads Investment Evaluation Governance Structure

Appendix Two: Developing an Evaluation Scope for Post Completion Evaluations

A brief orientation to the Program /Project

The Evaluation Scope needs to be a stand-alone document for proposed evaluators to understand the nature of the task. For this reason, the Evaluation Scope must contain sufficient information. This may include: a background about the program/project itself: the time frame, its value and location; a summary of the expected program/project outcomes; a short summary of the key approaches employed in implementing the program/project. It is also worth including some of the broader context in which the program/project is situated. Any information which can guide the reader in quickly understanding the scope/reach of the program/project is provided.

The purpose of the evaluation

The Evaluation Scope should clearly identify the purpose(s) of the evaluation. This allows the evaluators to reflect these priorities in the evaluation plan. The primary audience of the evaluation are also identified here so that the evaluator can understand the users of the evaluation. Primary audience should ideally be identified by title not only organisation. This should also include any important management decisions that the primary audience are expected to make (e.g. whether to continue or end the program!).

Key Issues are identified and discussed

Any important issues that have informed the call for, or design, of the evaluation terms of reference should be identified and described. It is best if they are described in neutral language and do not infer an expectation of findings. This should also highlight all possible inclusions and exclusions.

Evaluation Questions

The Evaluation Scope should include the key evaluation questions (KEQs) that have been crafted especially for this evaluation study.

The KEQs are outlined in Section 5, which includes a description of the KEQ and specific considerations. During the development of the evaluation plan, specific considerations will also need to be selected, which will show what specific information will be required to answer the broader questions (refer to Section 9 for guidance).

Evaluation Management and Processes

Adequate time and resources need to be allowed to enable the evaluation to be completed with an adequate degree of rigor. The following processes are allowed for:

- **An inception meeting.** This includes a verbal briefing on the key issues and priority information. This is often conducted by phone or face-to-face before the evaluation plan is developed (up to half day).

- **Adequate time allocated for document review and document appraisal.** Time needs to be allocated to reviewing program/project documentation and for elaborating an evaluation plan. The depth of planning required should reflect the importance of the reviewing evaluation questions and creating sub-evaluation questions.
- **Adequate data collection opportunities to meet the evaluation questions.** Make existing data (before studies) available and allow time for any further data collection. Check that the consultants have sufficient time to answer all the evaluation questions, as well as to work together as a team to process and discuss findings and identify further requirements as the field work unfolds.
- **Adequate time to analyse the data.** In addition to collecting the data, an evaluator will need time to analyse the data – the time required will very much depend on the methodology and scale of the program/project.
- **A feed-back and dissemination session**. Feedback sessions may be planned with different users together at the same forum or separately depending on the sensitivity of findings. It is worthwhile describing the required approach for feedback of results. For example describe what is planned in terms of ensuring learning and dissemination of the evaluation results and the evaluator's role in this. If a participatory evaluation is required, then state which stakeholders should be involved in the development of recommendations.
- **The process for commenting and quality assurance.** The process for commenting on the draft report should be described. The comment process should ensure that the evaluation team are allowed to make final decisions on what to include in the report – especially concerning the findings. Make sure the time allocated to the evaluation team to respond to comments reflects (a) the range of comments generated; and (b) the extent to which these comments require significant structural change in the final report. The Evaluation Scope should also consider whether the evaluation report will be subject to internal peer review, or technical peer review and if so, whether the evaluator is expected to respond to this

Outlining preferred methodology

It is usually better to work with the evaluator to discuss the most appropriate methodology or evaluation design in a schedule of methods. It is best to outline key factors that may influence the approach and design (e.g. number of people to be reached, desired mix of quantitative or qualitative data, requirement for statistical inference, use of participatory methods, degree of objectivity etc.).

Report requirements: what are the outputs expected from the evaluator?

The Evaluation Scope should also specify the reporting requirements, including what type/s of reports will be required. Reporting requirements might be:

- Evaluation plan
- Draft report
- Final report – (and be specific about how many pages) with a stand-alone executive summary.

Skill sets of evaluation personnel reflect priority questions

The following skill sets are critical for the evaluation team:

- Expertise in monitoring and evaluation (particularly experience in post completion evaluation).
- Understanding and experience in using transport statistics
- Understanding and experience in using Investment Management Approach tools.

Appendix Three: Guidance on Selecting an External Evaluation Consultant

When selecting an external evaluation consultant, there are a number of general characteristics and qualifications that should be considered, including:

Content and Contextual knowledge

- **Understanding of VicRoads business and transport sector**. Having an understanding of the types of interventions (policies, programs and projects types) and the political, cultural and geographical context these are delivered in will determine the consultants' ability to plan and develop an evaluation that is fit for purpose.
- **Knowledge of Investment Management Approach and associated tools.** It is important for the external evaluator to be familiar with the VicRoads approach to investment management to ensure consistency in the language and methods used throughout the evaluation. In particular, the evaluator should have an understanding and/or experience in applying the Department of Treasury and Finance's Investment Management Standards which underpin the Investment Management Approach used in VicRoads. This will also ensure a level of efficiency in utilising the IMA outputs developed at the investment development stage, saving significant time and cost of replanning during evaluation stage.

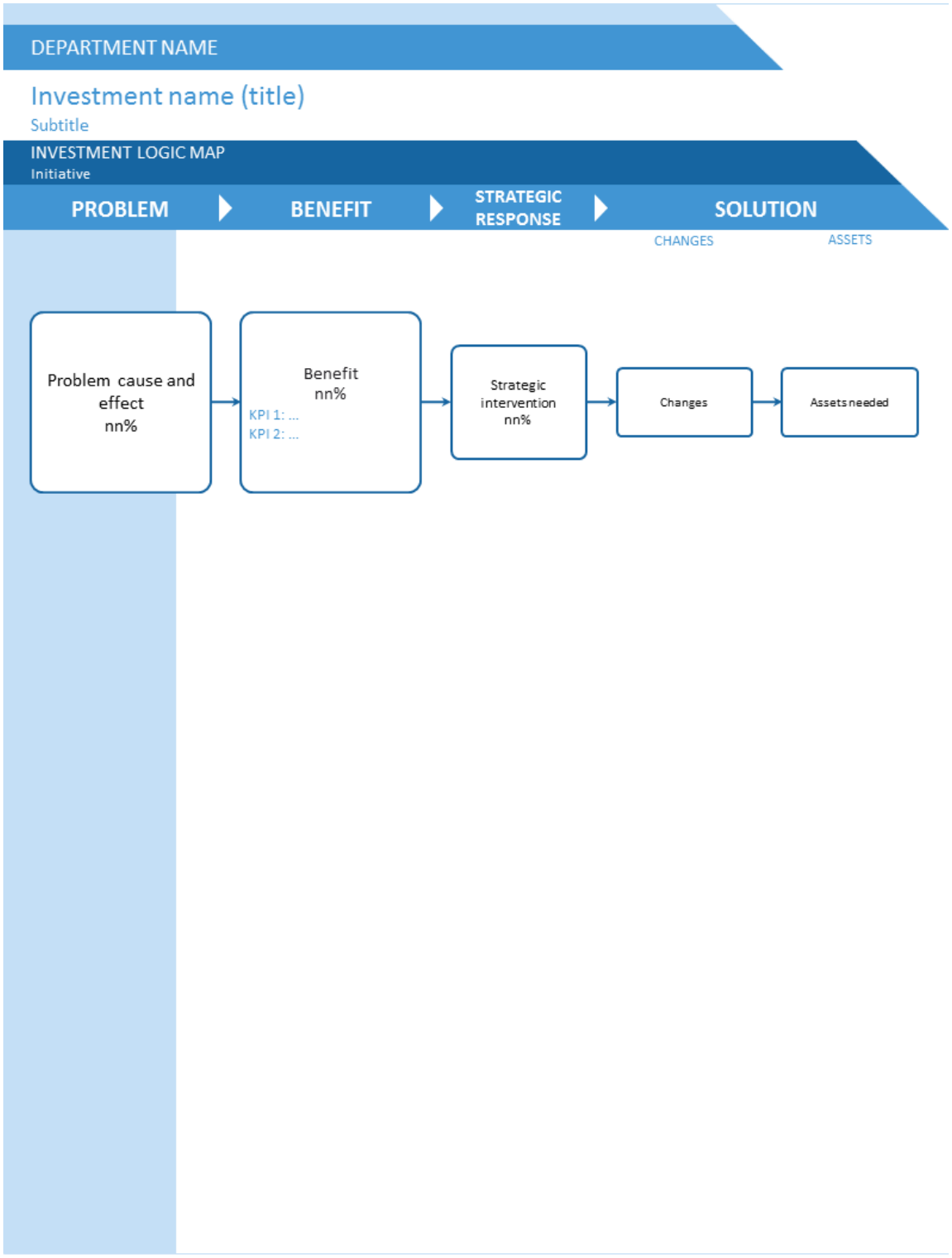
Research and Evaluation skills

- **Specialised knowledge, experience and expertise.** This will ensure that the evaluator is able to competently design a study to best answer the KEQs. It is important to identify who from the consultancy will be involved in the evaluation and what is their individual experience and expertise. The knowledge and expertise should relate to both in post completion evaluations as well as in the ability to understand and use transport statistics.
- **Evaluation History.** Hiring a consultant with an evaluation history that suggests a high level of technical competence may help to increase credibility.
- **Research and Analysis Skills.** The external evaluator should have strong qualitative and quantitative research skills, as well as the ability to combine these information types where necessary.
- **Flexibility and methodological agility.** It is important that the consultant is able to respond and adapt to the specific needs of the evaluation. There are a number of factors that need to be identified to understand this key point including :
    - How the consultant proposes to synthesise different stakeholder perspective of 'value'
    - How will they manage specific challenges such as budget, political or methodological constraints?
    - What is their preferred evaluation approach and does that align with VicRoads preferred approach? The approach they identify their business with will demonstrate their ability (or not) to quickly adapt to a different approach.

General Consultancy Skills

- **Capacity.** The evaluator/evaluation team should have adequate time and/or resources to conduct the evaluation?
- **Personal Working Style.** It is important to identify and establish that the working style of the consultant align with VicRoads values and/or expectations of quality.
- **Communication Skills**. The external evaluator must have adequate verbal and written communication skills. The external evaluator must understand the differing needs of different stakeholders and be able to effectively communicate findings accordingly.
- **Collaborative Skills**. The external evaluator must be willing to involve VicRoads throughout the entire evaluation process to help facilitate 'shared ownership' and a deeper understanding of the findings.

Appendix Four: Investment Logic Map Template



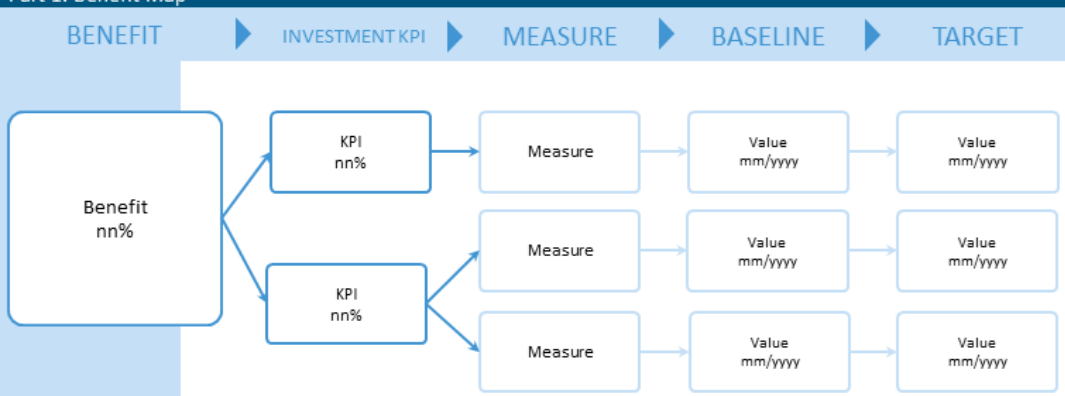
Appendix Five: Benefit Management Plan Template

DEPARTMENT NAME

Investment name (title)

Subtitle

BENEFIT MANAGEMENT PLAN
Part 1: Benefit Map



RESPONSIBILITY FOR DELIVERING THE BENEFITS		
Name	Position	dd/mm/yyyy

Investor: <firstname surname>
Facilitator: <firstname surname>
Accredited Facilitator: Yes / No

Version no: <e.g. 0.1, 1.0 etc>
Initial Workshop: <dd/mm/yyyy>
Last modified by: <firstname surname dd/mm/yyyy >
Template version: 5.0

Investment Name (Title)
Subtitle
<Insert Benefit description here>

KPI:	Insert KPI description here	
Measure	Insert measure description here	
	Baseline	Value (dd/mm/yyyy)
	Target	Value (dd/mm/yyyy)
	Interim target	Are there interim targets to ensure things are on track (value, date mm/yyyy)?
	Source	What is the source of the data to be used to measure this KPI?
Reporting	Forum	Where will this KPI be reported?
	Start date	When will the reporting start (dd/mm/yyyy)?
	Frequency	How frequently will it be reported (monthly, quarterly, annually)?
	End date	When will reporting finish (dd/mm/yyyy)?
Responsibility for reporting	Name Position Organisation	

KPI:	Insert KPI description here	
Measure 1:	Insert measure description here	
	Baseline	Value (dd/mm/yyyy)
	Target	Value (dd/mm/yyyy)
	Interim target	Are there interim targets to ensure things are on track (value, date mm/yyyy)?
	Source	What is the source of the data to be used to measure this KPI?
Measure 2:	Insert measure description here	
	Baseline	Value (dd/mm/yyyy)
	Target	Value (dd/mm/yyyy)
	Interim target	Are there interim targets to ensure things are on track (value, date mm/yyyy)?
	Source	What is the source of the data to be used to measure this KPI?
Reporting	Forum	Where will this KPI be reported?
	Start date	When will the reporting start (dd/mm/yyyy)?
	Frequency	How frequently will it be reported (monthly, quarterly, annually)?
	End date	When will reporting finish (dd/mm/yyyy)?
Responsibility for reporting	Name Position Organisation	

Investor: <first name surname>
Facilitator: <first name surname>
Accredited facilitator: Yes / No

Version no: <e.g. 01, 1.0 etc>
Initial workshop: <dd/m/yyyy>
Last modified: <first name surname dd/mm/yyyy>
Template version: 5.0

<Insert Benefit description here>

KPI:	Insert KPI description here	
Measure	Insert measure description here	
	Baseline	Value (dd/mm/yyyy)
	Target	Value (dd/mm/yyyy)
	Interim target	Are there interim targets to ensure things are on track? (value, date mm/yyyy) (value, date mm/yyyy) (value, date mm/yyyy)
	Source	What is the source of the data to be used to measure this KPI?
Reporting	Forum	Where will this KPI be reported?
	Start date	When will the reporting start (dd/mm/yyyy)?
	Frequency	How frequently will it be reported (monthly, quarterly, annually)?
	End date	When will reporting finish (dd/mm/yyyy)?
Responsibility for reporting	Name	
	Position	
	Organisation	

KPI:	Insert KPI description here	
Measure 1:	Insert measure description here	
	Baseline	Value (dd/mm/yyyy)
	Target	Value (dd/mm/yyyy)
	Interim target	Are there interim targets to ensure things are on track? (value, date mm/yyyy) (value, date mm/yyyy) (value, date mm/yyyy)
	Source	What is the source of the data to be used to measure this KPI?
Measure 2:	Insert measure description here	
	Baseline	Value (dd/mm/yyyy)
	Target	Value (dd/mm/yyyy)
	Interim target	Are there interim targets to ensure things are on track? (value, date mm/yyyy) (value, date mm/yyyy) (value, date mm/yyyy)
	Source	What is the source of the data to be used to measure this KPI?
Reporting	Forum	Where will this KPI be reported?
	Start date	When will the reporting start (dd/mm/yyyy)?
	Frequency	How frequently will it be reported (monthly, quarterly, annually)?
	End date	When will reporting finish (dd/mm/yyyy)?
Responsibility for reporting	Name	
	Position	
	Organisation	

Responsibility for delivering the benefits
<Name>
<Position>
<dd/mm/yyyy>

Appendix Six: Investment Concept Brief (ICB) template

Investment Name (Title)
Subtitle

Context	What is the compelling reason this investment should be considered further?	
	Description of context	

Cost	What are the likely costs of this investment?	Cost (range)
	Investment item (change or asset needed)	$n mil - $n mil
	Investment item (change or asset needed)	$n mil - $n mil
	Investment item (change or asset needed)	$n mil - $n mil
	Investment Total	**$n mil - $n mil**
	Operational costs if significant	
	Operational costs	$n mil - $n mil pa

Time	What are the expected timeframes for the key deliverables?	Time from funding
	Description of deliverable/milestone	mm-mm
	Description of deliverable/milestone	mm-mm
	Description of deliverable/milestone	mm-mm
	Description of deliverable/milestone	mm-mm
	Description of deliverable/milestone	mm-mm

Risks	What are the primary risks to the success of this investment delivering the benefits?	Likelihood	Criticality
H: High	Description of risk	H,M,L	H,M,L
M: Medium	Description of risk	H,M,L	H,M,L
L: Low	Description of risk	H,M,L	H,M,L
	Description of risk	H,M,L	H,M,L
	Description of risk	H,M,L	H,M,L

Dis-benefits	What negative impacts are likely to occur by successfully implementing this solution?	Likelihood	Impact
H: High	Description of disbenefit	H,M,L	H,M,L
M: Medium	Description of disbenefit	H,M,L	H,M,L
L: Low	Description of disbenefit	H,M,L	H,M,L
	Description of disbenefit	H,M,L	H,M,L

Critical Dependencies	What external conditions are critical to the success of this investment?
	Description of critical dependency
	Description of critical dependency
	Description of critical dependency

Policy Alignment	What is the primary policy to which this investment will contribute?
	Description of policy alignment

Investor	Who is the senior person who will ultimately be responsible for delivering the identified benefits?
	Name
	Position
	Signature
	dd/mm/yyyy

Appendix Seven: Common Evaluation Methods used to collect Data

The data collection method chosen must fit the purpose of the evaluation and be suitable for providing answers to the key evaluation questions. As mentioned in Section 9 of this Framework, a combination of methods may be required to answer all key evaluation questions and thus adequately evaluate the project/program. In addition to the methods mentioned in Section 9, the following table outlines a number of evaluation methods that can be used to collect data for post completion evaluations.

Approach	Definition	When this approach may be used	KEQ	Examples
Case study	Documentation of outcomes or processes in specific instances (i.e. looking at particular sites or treatments). Case studies can be illustrative, exploratory, used to investigate a specific issue, to ascertain differences between sites and/or treatment options and to provide evidence on the effects of a treatment on a specific site.	• Can draw on both qualitative and quantitative data • When changes at a specific site may have broader implications • Can be nested within a broader evaluation study	Effectiveness (KEQ3) Unintended outcomes (KEQ4)	See 'Case Study' on Better Evaluation
Business case analysis	Business case analysis assesses the project design and planning phase when the strategic fit and options analysis are an important aspect of the evaluation. Often undertaken in the form of Gateway Reviews.	• When the planning and design phase is of critical importance • When required for Gateway Reviews (conducted for HVHR projects)	Appropriateness (KEQ1) Efficiency (KEQ2)	Blackburn Rail Separation and Bayswater Rail Separation Projects Gateway Review (July 2012)
Internal Performance Reports such as: • Surveys • Other compliance reports • Management reports • Program files	Internal Performance Reports help to measure the progress achieved against initial expectations and performance measures (DTF, 2005)	• Useful to improve accountability/ transparency and drive organisational learning and improvement • Can provide input to cost-benefit and net impact analysis	Efficiency (KEQ2) Effectiveness (KEQ3)	
Contractor performance review	Review of contract delivery by VicRoads.	• Can be used to assess the process of delivery • Useful for identifying opportunities for improvement	Efficiency (KEQ2) Learnings	Calder Freeway Carlsruhe Section Post Contract Review (May 2004)
Community survey	Quantitative (i.e. structured questioning) and qualitative (i.e. open or semi-structured) survey questionnaires can be implemented to understand social outcomes. Can focus on a range of variables and attributes including satisfaction, wellbeing, perceptions, attitudes, awareness etc.	• Can be implemented to understand the social effects of an project/program or project • Useful for understanding community needs (KEQ1), social benefits/costs (KEQ3) and unintended outcomes (KEQ6) of an intervention	Appropriateness (KEQ1) Effectiveness (KEQ3) Unintended outcomes (KEQ4)	See Survey page on Better Evaluation (2013)

Benefit-cost analysis (BCA)	Benefit-cost analysis (BCA) is an approach and set of procedures for defining and comparing a project/program's benefits and costs. BCA involves: the systematic identification of a project's impacts and effects or options for undertaking the project; and the quantification of the resultant benefits and costs (DOT, 2010). Typically used in business case development.	• When it is necessary to compare benefits relative to costs in financial terms • Mostly appropriate for quantifiable benefits and costs • To evaluate outcomes and impact • On its own, does not demonstrate causality; may need to be combined with other methods to achieve this • Specified by DTF as a preferred approach to quantification of benefits (DTF, 2013b) • In a transport setting, where detailed economic evaluation has occurred, detailed analysis on a year by year basis is generated. This can provide a list of traffic volume, speeds and accident numbers which can be uses as a basis to compare forecast versus the actual	Effectiveness (KEQ3)	Springvale Road Rail Separation Project Value for Money Report (November 2010)
Cost effectiveness analysis	Cost-effectiveness is a measure of a project/program's outputs (primary scope) relative to the delivery of benefits. Cost effectiveness analysis compares mutually exclusive project alternatives based on monetary costs per unit of physical output (adapted from OECD, n.d., Austroads, 1998, DOT, 2010).	• Recommended by DTF (2013) when BCA is not possible; used when there are constraints in conducting BCA (only for small projects). • Only suitable when benefits are pre-defined • On its own, does not demonstrate causal linkages. May need to be combined with other methods to achieve this	Effectiveness (KEQ3)	See 'Evaluating Cost-Effectiveness Comparing Strategies to Increase School Attendance in Kenya' in Impact Evaluation in Practice (World Bank, 2011, Page 14)
Cost efficiency analysis	Cost-efficiency is a measure of the costs and provider burden relative to a project/program's output (adapted from OECD, n.d. and Austroads, 1998). Value for money and audit reports usually consider efficiency.	• If there is a financial audit component in an evaluation • Project/Programs delivered under resource constraints • Does not demonstrate causal linkages or outcomes; specific to activity-output relationship	Efficiency (KEQ2)	Springvale Road Rail Separation Project Value for Money Report (November 2010)
Secondary analysis of traffic survey data	Routine traffic data is collected by VicRoads via a number of data sources (see Section 9). Additional traffic surveys can be put into place to monitor usage patterns, traffic flows and distribution etc.	• Undertaken to understand the effects and benefits of an intervention at the site and network level/s • Used to determine benefits including road safety, efficiency, congestion etc.	Effectiveness (KEQ3) Unintended outcomes (KEQ4)	Taylors Road Post Project Evaluation (December 2010)

Interviews	Interviews are conducted to gather perceptions, views and perspectives of stakeholders who can either be: involved in the delivery of an intervention (i.e. VicRoads staff or contractors), or effected by the outcomes of an intervention (i.e. road users and community members).	• Interviews can be used for collecting primarily qualitative data on project delivery, social benefits and/or learnings • Depending on the sample size, typically qualitative interview results are not generalisable • Interviews can provide insight into project delivery processes and causal mechanisms	Appropriateness (KEQ1) Effectiveness (KEQ3) Impact Sustainability (KEQ5) Unintended outcomes (KEQ4) Learnings	M1 Upgrade Project Post Completion Evaluation (June 2013)
Learning and reflection workshop	Conducted during or following project/program delivery, workshops can be held to convene project delivery staff to reflect on project learnings and how they may be applied to future workshops.	• The value of workshops is often in the *process* of bringing people together • Can be used to bring a range of stakeholders together • Particularly suitable for large projects with several different teams/components	Learnings	The Deer Park Bypass: One Team, One Dream Learning and Closure Report (December 2010)

Appendix Eight: Scoring Guide for KEQ Specific Considerations

KEQ1: Appropriateness

Strategic fit

Performance rating	Score	Performance descriptors
Excellent	5	Strong evidence to show that program/project aligned with Government strategies
Good	4	Good evidence to show that program/project aligned with Government strategies
Adequate (Business as usual)	3	Some evidence to show that program/project aligned with Government strategies
Poor	2	Program/project did not align with any Government strategies
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

Planning and design

Performance rating	Score	Performance descriptors
Excellent	5	Strong evidence to show that program/project was planned and designed appropriately
Good	4	Good evidence to show that program/project was planned and designed appropriately
Adequate (Business as usual)	3	Some evidence to show that program/project was planned and designed appropriately
Poor	2	Program/project was not planned and designed appropriately
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

Delivery

Performance rating	Score	Performance descriptors
Excellent	5	Strong evidence to show that program/project was delivered appropriately
Good	4	Good evidence to show that program/project was delivered appropriately
Adequate (Business as usual)	3	Some evidence to show that program/project was delived appropriately
Poor	2	Program/project was delivered appropriately
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

KEQ2: Efficiency

Cost efficiency

Performance rating	Score	Performance descriptors
Excellent	5	Significantly more cost-efficient when compared with similar projects
Good	4	Slightly more cost-efficient when compared with similar projects
Adequate (Business as usual)	3	As cost-efficient as other similar projects
Poor	2	Not as cost-efficient as other similar projects
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

Time efficiency

Performance rating	Score	Performance descriptors
Excellent	5	Significantly more time-efficient when compared with similar projects
Good	4	Slightly more time-efficient when compared with similar projects
Adequate (Business as usual)	3	As time-efficient as other similar projects
Poor	2	Not as time-efficient as other similar projects
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

KEQ3: Effectiveness

Achievement of benefits

Performance rating	Score	Performance descriptors
Excellent	5	All benefits exceed target
Good	4	All benefits meet target
Adequate (Business as usual)	3	50% of benefits meet target, 50% of benefits below target
Poor	2	No benefits meet target
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

Distribution of benefits

Performance rating	Score	Performance descriptors
Excellent	5	Distribution of benefits match the ILM exactly
Good	4	Distribution of benefits almost match the ILM
Adequate (Business as usual)	3	Distribution of benefits match the ILM fairly well
Poor	2	Distribution of benefits do not match ILM
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

Attribution/contribution

Performance rating	Score	Performance descriptors
Excellent	5	Project has attributed to all benefits
Good	4	Project has attributed to at least 50% of the benefits
Adequate (Business as usual)	3	Project has contributed to all benefits
Poor	2	Project has not contributed or attributed to any benefits
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

Management (of disbenefits and risks to benefits)

Performance rating	Score	Performance descriptors
Excellent	5	All disbenefits and risks to benefits were identified and managed
Good	4	Almost all disbenefits and risks to benefits were identified and managed
Adequate (Business as usual)	3	Some disbenefits and risks to benefits were identified and managed
Poor	2	Disbenefits and risks to benefits were not identified or managed
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

Cost-effectiveness

Performance rating	Score	Performance descriptors
Excellent	5	Significantly more cost-effective when compared with similar projects
Good	4	Slightly more cost-effective when compared with similar projects
Adequate (Business as usual)	3	As cost-effective as other similar projects
Poor	2	Not as cost-effective when compared with similar projects
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

KEQ4: Unintended Outcomes

Unintended benefits

Performance rating	Score	Performance descriptors
Excellent	5	TBC
Good	4	TBC
Adequate (Business as usual)	3	TBC
Poor	2	TBC
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

Unintended disbenefits

Performance rating	Score	Performance descriptors
Excellent	5	No unintended disbenefits identified
Good	4	Less than three minor unintended disbenefits identified
Adequate (Business as usual)	3	More than three minor unintended disbenefits identified
Poor	2	One or more significant unintended disbenefit identified
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

KEQ5: Impact Sustainability

Likely Impact Sustainability

Performance rating	Score	Performance descriptors
Excellent	5	Benefits likely to be sustained for the 5 or more years
Good	4	Benefits likely to be sustained for the next 3-4 years
Adequate (Business as usual)	3	Benefits likely to be sustained for the next 1-2 year
Poor	2	No further benefits to be had.
Insufficient evidence	1	Evidence unavailable or of insufficient quality to determine performance

Appendix Nine: A Guide to Assuring Quality in Post Completion Evaluation Reporting

The following set of questions can be used as guidance for the evaluator/evaluation team to identify any aspects of a draft Post Completion Evaluation Report that may require improvement before finalising the report.

Reporting Structure/Clarity

1. Has the report been structured in the same way as the VicRoads Post Completion Evaluation Report Template provided?
2. Has the information been provided in a clear and concise way that is meaningful to the intended audience and easily understood?

Methodology and data reliability

1. Has the methodology been clearly explained?
2. Are all stakeholders for the evaluation and their interest in the evaluation identified?
3. Are all inclusions and exclusions including any limitations or constraints for the chosen method listed?
4. Are all data sources clearly stated?
5. Are all additional documents relevant to data collection/evaluation methods attached to the report?
6. Are there any gaps in data? If so, have these been addressed and justified?

Findings

1. Does the report adequately respond to all relevant KEQs?
2. If a KEQ has not been addressed, has a sufficient justification as to why not been included in the report?
3. Does the report address all information needs and requirements outlined in the Terms of Reference?

Conclusions

1. Has a reasonable judgement made on the findings?
2. Are there any assumptions or factors that would have affected the findings.

Learnings

1. Have the learnings from each stage of the evaluation process been communicated in the report?
2. Have the key learnings been summarised and communicated in a valuable and useful way?

Recommendations

1. Do the recommendations flow from the findings in a logical way?
2. Do the recommendations take stakeholder views into consideration?

Appendix Ten: Key Concepts and Definitions

Key concept	Definition
Activity	A general term describing an action being performed. These are actions being done (not what is being built).
Appraisal	The process of determining the impacts and overall merit of a proposed initiative, including the presentation of relevant information for consideration by the decision-maker (ATC, 2006). This process is often also referred to as 'formative' evaluation.
Appropriateness	Appropriateness refers to the suitability of a project's process (planning, design and delivery) in generating the expected benefits. It concerns the alignment between a project/program and the context in which it is delivered and focuses on the extent to which a project/program is suited to relevant priorities and needs and/or has addressed the problem it was designed to address.
Benefit	The value the investment will provide to the organisation or its customers. Benefits are normally a positive consequence of successfully responding to the identified problem. A benefit is supported by one or more key performance indicators (KPIs) that demonstrate the specific contribution of an investment to the benefits sought by the organisation (DTF, 2013a).
Benefit-Cost Ratio (BCR)	A ratio to identify the relationship between the cost and benefits of a proposed project. It is used to detail the relationship between possible benefits and costs of undertaking activities. A BCR >1 represents that a project will deliver more benefit than what it cost to deliver.
Benefit Management Framework (BMF)	The BMF is a hierarchical alignment of government (outcomes), organisation (benefits) and project (indicators). It aims to standardise the description of the key outcomes and benefits to which VicRoads programs and projects contribute. The Benefit Management Framework has been created to assist with the development of Benefit Management Plans (BMP).
Benefit Management Plan (BMP)	The Benefit Management Plan is part of the strategic assessment and is a document that specifies how benefits of an investment are measured to successfully address an identified problem. It includes measures used as evidence that the benefits have been delivered. It also defines the dates the benefits are to be measured, who is responsible for the measurement and how they will be reported. This document is produced in the Benefit Definition Workshop. See Appendix 3 for example.
Capacity Building	A general term for increasing knowledge within an organisation. This may include planned training, workshops or seminar sessions.
Cost-effectiveness	Cost-effectiveness is a measure of the outputs relative to the delivery of benefits. Cost effectiveness compares mutually exclusive project alternatives based on monetary costs per unit of physical output (adapted from OECD, n.d., Austroads, 1998, DOT, 2010). Refer to Section 9, Table 12.
Cost-efficiency	Cost-efficiency is a measure of the costs and provider burden relative to the output (adapted from OECD, n.d. and Austroads, 1998). Refer to Section 9, Table 11
Disbenefit	A negative impact that might occur as a direct consequence of implementing a particular solution (DTF, 2013a).
Displacement of Benefits	Displacement refers to the change in position of an object from its initial position. Therefore, the displacement of benefits refers to a shift in, or changes to, benefits that have been brought about by a project/program. Displacement of benefits is often due to unexpected changes in service demand or other unintended outcomes that have an impact on the project's initial purpose or functionality.
Effectiveness	Effectiveness is the measure of how well benefits or outcomes are being achieved by the given outputs. $\text{Effectiveness} = \frac{\text{Outcomes (Benefits)}}{\text{Outputs}}$
Efficacy	Efficacy evaluates how well outcomes are being achieved given the resource inputs that apply. In other words, the cost/resource effectiveness of the total planning and project delivery process. $\text{Efficacy} = \frac{\text{Outcomes}}{\text{Input}}$

Key concept	Definition
Efficiency	Efficiency concerns how well outputs are produced by inputs and resources used (Austroads, 1998). In economic terms, efficiency is concerned with using the least costly resources available in order to achieve the desired results. $\text{Efficiency} = \frac{\text{Outputs}}{\text{Inputs}}$
Evaluation	"Evaluation is about the systematic collection and analysis of data about processes, outputs and outcomes to allow us to make statements, judgments, claims and conclusions which have the potential to impact on current and future decision-making." (Patton, 1997)
Final evaluation	Refer to *Post Completion Evaluation*
Full evaluation	Refer to *Post Completion Evaluation*
Formative Evaluation	Refer to *Appraisal*
Gateway review process	A team of external practitioners use their experience and expertise to provide Senior Responsible Owners of a program/project timely, independent and confidential advice at key decision points regarding progress and likelihood of delivery success. Lessons learned are applied throughout each stage (DTF, 2009). The GRP involves a series of stages or 'gates' including: • Gate 1 strategic assessment • Gate 2 business case • Gate 3 readiness for market • Gate 4 tender decision • Gate 5 readiness for service • Gate 6 benefits evaluation
Goals	The fundamental economic, environmental and social outcomes that a jurisdiction is aiming to achieve through all its activities *across all sectors* (not just transport), i.e. these are 'societal & whole of government' outcomes. Goals should be set once at the very start of the Framework, and should guide the setting of supporting objectives.
High Value High Risk (HVHR) Projects	HVHR projects are those that have a total estimated cost of more than $100m, are classified as 'high risk' using the Gateway Project Profile Model or are nominated by the Government as being part of the HVHR process.
Impact Sustainability	Impact sustainability is concerned with the ongoing benefits and/or disbenefits that are sustained from a project/program following completion.
Indicator	Indicators reflect the contribution of specific investments to the benefits sought by VicRoads. They should clearly identify how the investment contributes to the benefit that is being claimed and must be relevant, measurable and attributable to the investment.
Inputs	Inputs are usually the people, resources and materials used in activities or processes (Austroads, 1998).
Investment	The commitment of the resources of an organisation with the expectation of receiving a benefit.
Investment Concept Brief (ICB)	A two-page document that shows the logic underpinning an investment and identifies the likely costs, risks, dependencies and deliverables of the proposed solution. It is used to summarise the merits of an investment to allow decision-makers to prioritise competing investments before proceeding to a business case. This document is produced in the Solution Definition Workshop and is part of the strategic assessment. See Appendix 4 for an example.
Investment logic Map (ILM)	A map used to communicate the investment story on a single page using language and concepts that are understandable to the layperson. It focuses on the problems that the investment will try to address, the most effective responses and solutions to those problems and the measurable benefits that will arise if the solution is successful. This document is produced in the Problem Definition Workshop. See Appendix 1 for example.

Key concept	Definition
Investment Management	Investment is defined by DTF as 'the commitment of the resources of an organisation with the expectation of receiving a benefit'. Investment management (as per Investment Management Standards, DTF) relates to the aggregation of knowledge regarding an investment, a clearly and concisely described logic and a description of how the investment contributes to the benefits the organisation is seeking.
Investment Management Approach (IMA)	The Investment Management Approach is a holistic approach to how we **plan**, **deliver and learn** when considering any activity that we allocate resources to. Within VicRoads, it is a core element of any investment planning, development and evaluation process.
Investment Management Standard (IMS)	The Investment Management Standard (IMS), developed by DTF, is a collection of simple, commonsense ideas and practices that help organisations to direct resources to deliver the best outcomes.
Key performance indicator (KPI)	A measurable change that can be measured to demonstrate that a benefit expected from an investment has been delivered.
Measure	The quantifiable unit that will be used to validate that a target has been met.
Monitoring	Monitoring is the continuous assessment of project implementation in order to "facilitate risk management, measure progress towards achievement of objectives and to inform continuous improvement" (Regional Growth Fund, 2011).
Objectives	The changes that a jurisdiction is aiming to achieve *through its transport system*. These support the higher level goals.
Outcomes	Outcomes are the end result or impact of policies, programs or projects. The effect that is longer term and is often more difficult to measure. The outcome is the wider change or higher order outcomes at government level, for example, changes to people's socio-economic wellbeing, or economic growth and development, that is enabled by the benefit. Data collection may be more difficult and outcomes could be harder to directly attribute to a particular project.
Outcome Evaluation	Considers the extent to which the project/program has had an effect on delivering the benefits or outcomes it was seeking. This establishes the effectiveness of the investment (bearing in mind there would be other external factors affecting the changes).
Outcome Management	Outcome management is planning for an investment with the end in mind. Project/program developers should begin with a clear understanding of problems of the place and the specific changes that are needed to address the problems. This will enable the project developers to identify critical steps or milestones that achieve outcomes that matter to the community and government
Outputs	Outputs are what is actually being delivered. These are the means by which organisations achieve intended outcomes or the direct results of activities (Austroads, 1998, William Penn Foundation, 2012), for example, a new lane or a new strategy document.
Resource Efficiency	Resource efficiency is concerned with how resource efficient a project and/or treatment is in regards to resource use and allocation. Resources include people, capital and/or systems.
Post-completion evaluation	Post completion evaluation is the specific process of reviewing the outcomes and performance of an initiative after it has been implemented (ATC, 2006).Post completion evaluations consider all aspects of a project/program, including the inputs, activities, outputs, benefits and outcomes. This process is also often referred to as *outcome* evaluation, *final* evaluation, *full* evaluation or *summative* evaluation.

Key concept	Definition
Process Evaluation	Evaluating the inputs and activities associated with planning and implementation processes of an investment (identifying problems, benefits and solution options, as well as any scope changes, procurement, risk management etc during the delivery stage). This helps establish the efficiency of an output produced and improve the understanding of what actually happened and, as a result, helps explain why an outcomes was or was not achieved.
Strategic Assessment	A process to translate a concept into a robust service requirement. It identifies the business needs and the likely solution. The strategic assessment document incorporates the Investment Logic Map, Benefit Management Plan and Investment Concept Brief and expands on the information they contain.
Unintended Outcomes	Unintended outcomes consider all benefits and disbenefits that have been brought about through investment that were not otherwise expected and planned for.
Victorian Auditor-General Office (VAGO)	An office of the Auditor-General. An independent officer of Parliament appointed to examine and report on the efficient and effective management of public sector resources and funds. Their purpose is to provide independent assurance to the Victorian Parliament on the accountability and performance of the Victorian public sector.