TRIPLE-4
KNOWLEDGE DEVELOPMENT AND PRIORITISATION FRAMEWORK
Delivering transport sector outcomes

INTRODUCTION

There is demand for improvements in public services to address complex, long-term issues that affect New Zealanders.

Overview
Research and information plays a key role in reshaping the policy landscape. The Government’s overall goal is to grow the economy to deliver greater prosperity, security and opportunities for all New Zealanders. To do this requires decisions and priorities underpinned by robust research data, statistics and information.

A strong evidence base leads to better transport outcomes that deliver benefits, reduce harm and avoid unintended consequences.

The Triple-4 knowledge development and prioritisation framework

This framework (right) provides clear guidance to researchers and research funders on how best to prioritise effort according to sector needs. This will support evidence-informed intervention decisions.

How to use the framework

The Triple-4 knowledge development and prioritisation framework is designed to help you get a good understanding of knowledge needs to assist with prioritising investments in policy, research and information gathering. It has three components, each with four elements and it is designed to be iterative.

The structure
i. Define the purpose of a knowledge development initiative
ii. Clearly define the problem or opportunity for research
iii. Develop and define a proposed response
iv. Follow the Triple-4 framework process to assess and prioritise the proposed response

The Triple-4 framework process

1. Identifies knowledge gaps to achieving long-term sector outcomes, which include effectiveness, efficiency, resilience, safety and responsibility.
2. Identifies the nature and extent of the knowledge gaps in defining, assessing, delivering and balancing outcomes.
3. Assesses the priority of knowledge needs by applying four tests to assess the relative priorities:
   a. Impact – Can we identify existing and potential end use and end users? Do we know what the benefits will be and how big they are? Do we know how necessary the research is? How broad is the application – will the knowledge gained by the research be accessible across the sector? Can the knowledge be applied flexibly and in different situations?
   b. Access to right resources – Are we able to access the skills, capabilities, techniques, tools and systems required? Is the required data reliable and available? Do we have the capacity to do the work and is it affordable?
   c. Strategic value – Can the knowledge gained by doing the research help to address the strategic issues faced by the sector? Is this the right time to do this research considering the strategic issues?
   d. Potential end users – Will the knowledge gained by doing the research be useful to decision makers?

Three case studies (over) have been prepared to illustrate the method.
To access and invest in the right capacity to deliver the Transport Research Strategy.

1: Building Capacity

Overview

Purpose
To access and invest in the right capacity to deliver the Transport Research Strategy.

Problem definition and knowledge development opportunity
Articulate and agree the skills, attributes and knowledge required in the transport research community. Establish baseline information to be developed and maintained to allow good understanding of the current capability profile, how this might be changing, and the extent to which the current profile is likely to continue to be relevant.

Response
Collect or develop baseline data or information – a one-off project will be required to identify and agree the key attributes and training needs for the transport research community, which can then be monitored into the future. We recommend that a multi-agency approach be taken with involvement from academics and other professional groups.

Triplicate assessment

Knowledge gap in achieving long-term sector outcomes

Effectiveness
The proposed initiative will provide additional measures to better understand user needs and preferences to assist policy and investment planning.

Efficiency
Better understanding of what constitutes high quality transport sector research capability will

Nature of knowledge gap

Defining outcomes
Inform what constitutes optimum capability in the transport sector research community

Measuring outcomes
Inform what the most appropriate measures of capability across different capability building outcomes and communities are

Assessing priorities

Impact
Makes a significant difference to measuring transport outcomes

Breadth of application
Applicable across transport as well as outside the transport sector

Access to right resources
Capability development methods are available from other disciplines which may be transferable

Strategic value
Reinforces the sector’s commitment to delivering high quality sector outcomes on a sustainable basis

2: Research

Overview

Purpose
To gather additional information on people’s attitudes, preferences and perceptions about transport.

Problem definition and knowledge development opportunity
People’s attitudes, perceptions and preferences greatly influence their transport choices. In order to understand why people make the transport choices they do, it would be useful to have additional information about why they have these attitudes, preferences and perceptions. This type of information would be useful to supplement economic modelling techniques to inform a range of policy, investment and operational decisions. At present, data on people’s attitudes, preferences and perceptions is limited largely to a small number of surveys conducted by commercial operators (which are not publicly available), and individual, often qualitative, studies carried out in the academic sector. There is an opportunity to work with the academic sector to develop the skills and knowledge of the public sector in this field.

Response
Develop research and capability – carry out additional surveys to gather information on people’s attitudes, preferences and perceptions of the cost, reliability, security, safety and convenience across different modes of transport.

Triplicate assessment

Knowledge gap in achieving long-term sector outcomes

Effectiveness
The proposed research will provide additional measures to better understand user needs and preferences to assist policy and investment planning.

Efficiency
Better understanding user preferences will help

Safety & Responsibility
Measuring outcomes
Inform how outcomes might be best assessed

Delivering outcomes
Identify the type of interventions to influence outcomes

Balancing outcomes
Identify appropriate balance and trade-off between outcomes

Assessing priorities

Impact
The proposed research will add to current stock of knowledge as such information is currently incomplete

Breadth of application
The information will be useful to a range of stakeholders and applications

Access to right resources
Some methods are available for testing but the research will require a large sample size to obtain representative results

Strategic value
The knowledge can be used to inform the Government Policy Statement on Land Transport Investment and many other strategic policy decisions

3: Data and Information

Overview

Purpose
To better understand accessibility in New Zealand.

Problem definition and knowledge development opportunity
Accessibility is an important but difficult concept to consider and there is a lack of a clear definition. There are three aspects of accessibility:

- access to mobility (or transport services) – how different groups can access transport services, considering a ‘whole of journey’ perspective
- access to specific destinations or locations – how well connected are different destinations (e.g. by function such as ‘work’, ‘school’, ‘healthcare’ and ‘home’) for different groups at different times
- barriers to access – what are the barriers to accessing transport for any user groups and the reasons why they exist

Response
Collect or develop baseline data or information – a one-off project will be required to identify and agree the key attributes and training needs for the data and information community, which can then be monitored into the future. We recommend that a multi-agency approach be taken with involvement from academics and other professional groups.

Triplicate assessment

Knowledge gap in achieving long-term sector outcomes

Effectiveness
The additional measures will assist us to better understand accessibility issues from the transport user’s perspective

Efficiency
Better understanding user preferences will help us to:

Safety & Responsibility
Defining outcomes
Understand measures of accessibility that are complementary to, or substitutes for measures of mobility; and define specific outcomes around access to services, transport opportunities or locations

Measuring outcomes
Inform the most appropriate measures of accessibility across different, outcomes, regions and populations; and improve measurement of transport outcomes, barriers and other characteristics

Delivering outcomes
Understand which interventions best address barriers to access

Assessing priorities

Impact
Makes a significant difference to measuring transport outcomes

Breadth of application
Applicable across transport as well as outside the transport sector

Access to right resources
Capability development methods are available from other disciplines which may be transferable

Strategic value
Reinforces the sector’s commitment to delivering high quality sector outcomes on a sustainable basis