

# INTRODUCTION

**New Zealanders are going places – and we need an effective, efficient, resilient, safe, and socially and environmentally responsible transport system to get us there.**

High-quality data, information and research enriches our understanding of the transport system and how it works. Our transport system supports the needs and wants of all New Zealanders to go places – whether to work, meet family and friends, transport goods, deliver services or connect with the rest of the world.

### The complementary documents

The New Zealand Transport Domain Plan and the New Zealand Transport Research Strategy are complementary documents that provide the strategic direction the sector requires. The Domain Plan will ensure that the sector has the right statistics and information to support evidence-based decision-making, while the Research Strategy will achieve a similar goal by creating an environment to ensure investment in the right research.

The Domain Plan and the Research Strategy both:

- ▶ identify and tabulate data, information and research needs under four common knowledge themes, which are crucial for developing a hierarchy of statistical and research requirements
- ▶ promote using the Triple-4 knowledge development and prioritisation framework to:
  - identify knowledge gaps in achieving the long-term sector outcomes
  - identify the nature of the knowledge gap
  - assess priority for closing the knowledge gap based on four key principles
- ▶ propose growing the embryonic transport knowledge hubs to support collaborative work to fill knowledge gaps.



The full version of the two publications can be downloaded from the Ministry of Transport's website [www.transport.govt.nz/research](http://www.transport.govt.nz/research)

# KNOWLEDGE HUBS

## The transport knowledge hubs

**Transport knowledge hubs are groups within the transport research community that exist to broaden research, evidence, analytical and modelling knowledge and capability. The knowledge hubs provide a mechanism for members of the transport research community from public and private organisations, as well as academia, to connect with each other.**

Transport knowledge hubs for aviation, forecasting, safety, household travel, economics and technology have already been established in response to demand. These knowledge hubs hold regular discussion forums, seminars and workshops on various transport analysis and research subjects. The requirement and objectives for each knowledge hub may vary over time and with the needs of the research community. As the research community works more closely together, additional knowledge hubs may be set up to meet research needs.

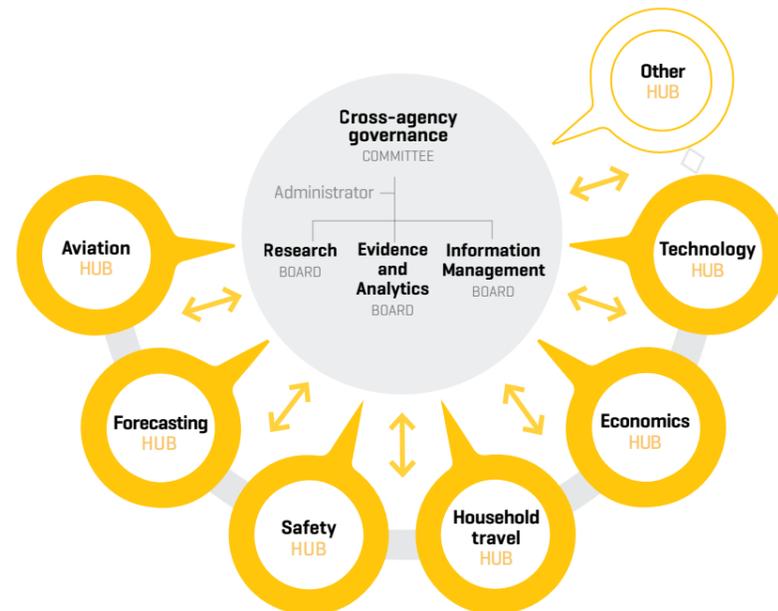
The transport knowledge hubs will be the main vehicle for implementing both the Domain Plan and the Research Strategy.

The proposed governance structure includes a cross-agency governance committee and three decision boards.

### Governance structure

The structure involves stakeholders working through leaders of the transport knowledge hubs and their members. This governance structure does not interfere with the internal communication and collaboration arrangements that are already operating.

## GOVERNANCE STRUCTURE FOR THE TRANSPORT KNOWLEDGE HUBS



## TRANSPORT DOMAIN PLAN AND TRANSPORT RESEARCH STRATEGY

# SUMMARY

Setting priorities for meeting transport statistical and research needs into the future



*What we know  
What we need to know  
How we're going to work together*

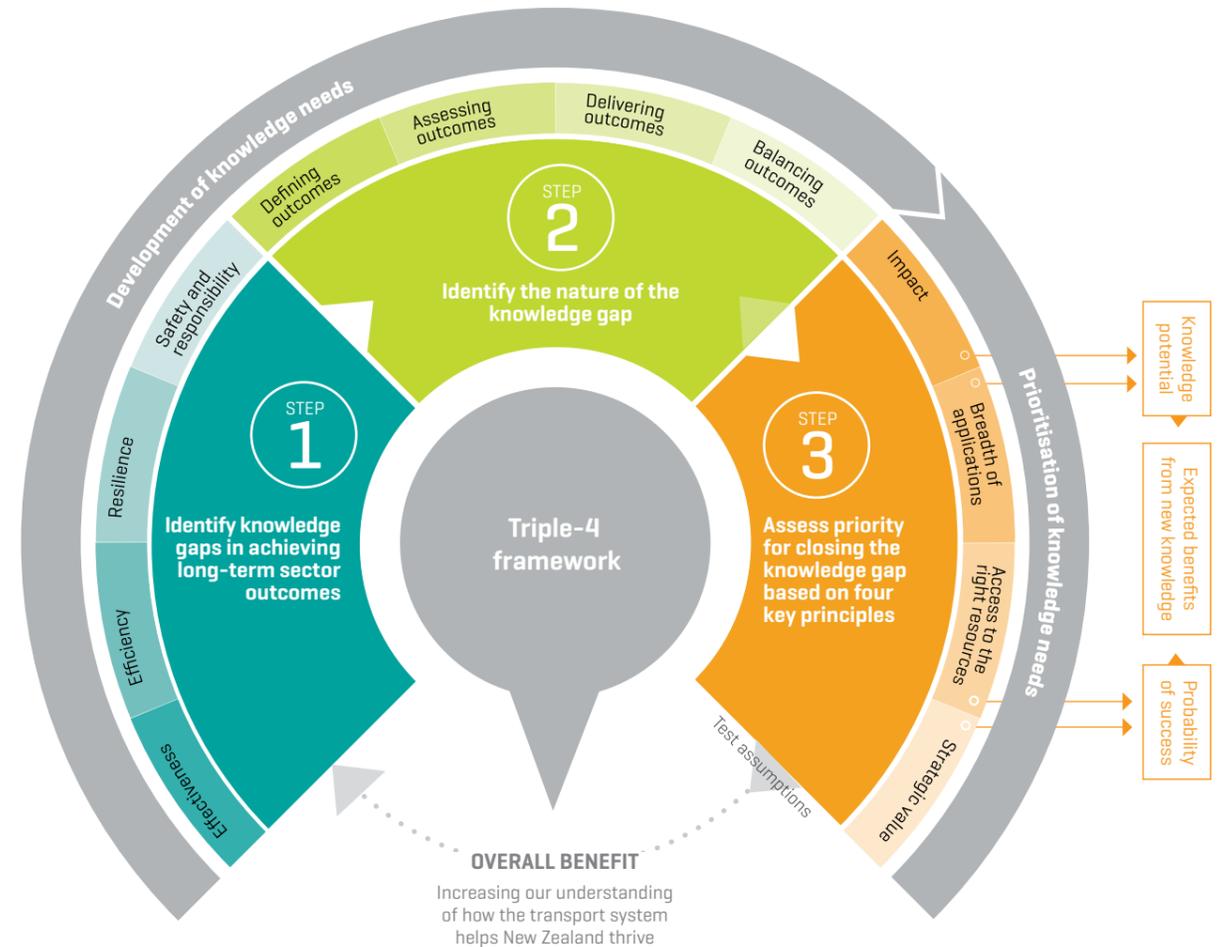
# KNOWLEDGE NEEDS AND PRIORITIES BY THEMES

The four knowledge themes articulate the broad categories of knowledge required to address long-term strategic issues. These knowledge themes can help us to better align the key long-term strategic issues, to identify the knowledge gaps.

User behaviour and needs	Transport impacts	System planning and management	Future funding and charging
<b>Knowledge needs</b> The transport choices and preferences of users, communities and society.	<b>Knowledge needs</b> The size, exposure, valuation, interactions and influences of social, economic and environmental impacts.	<b>Knowledge needs</b> How users make transport decisions by mode, location and industry, and how to measure monetary and non-monetary benefits and costs of transport.	<b>Knowledge needs</b> How transport cost burdens are distributed, how users respond to changes in cost and price attributes, and what the impact of changing technologies and user needs has on revenue and charging.
<b>Research priorities</b> <ul style="list-style-type: none"> <li>Reasons for travel and non-travel choices</li> <li>Behaviours during travel</li> <li>Value of transport benefits to society</li> <li>Impacts on transport use due to changes</li> </ul>	<b>Research priorities</b> <ul style="list-style-type: none"> <li>Quantification and valuation of relationships between transport and harms, health, land use and the economy</li> <li>Measurement of distributional impacts</li> <li>Environmental impact framework</li> </ul>	<b>Research priorities</b> <ul style="list-style-type: none"> <li>Effectiveness and efficiency of interventions and their interactions with technologies</li> <li>Relationship between interventions and impacts at a system level</li> <li>Monetary and non-monetary returns on investment</li> <li>Sector definition of resilience</li> </ul>	<b>Research priorities</b> <ul style="list-style-type: none"> <li>Where and how costs and benefits of transport are borne</li> <li>Impacts of technology on funding</li> <li>Impacts of technology on charging systems</li> </ul>
<b>Statistical priorities</b> <ul style="list-style-type: none"> <li>Freight efficiency measures</li> <li>User behaviours and preferences information</li> <li>Information to understand Māori needs from transport</li> <li>Improve access to and collection of travel information for all modes</li> </ul>	<b>Statistical priorities</b> <ul style="list-style-type: none"> <li>Health and safety risk profiles</li> <li>Improve economic modelling and establish baseline assumptions</li> <li>Measurement of environmental effects</li> <li>Transport emission profiles</li> </ul>	<b>Statistical priorities</b> <ul style="list-style-type: none"> <li>Measures of accessibility</li> <li>Improving measures of national freight demand and utilisation</li> <li>Geospatial tracking of freight and people movements</li> <li>Land use and transport network data</li> </ul>	<b>Statistical priorities</b> <ul style="list-style-type: none"> <li>Information on cost of providing, operating and maintaining the transport network of all modes</li> </ul>

# TRIPLE-4 FRAMEWORK

Triple-4 knowledge development and prioritisation framework for delivering transport sector outcomes



## Definitions:

- Effectiveness**  
Moves people and freight where they need to go in a timely manner
- Efficiency**  
Delivers the right infrastructure and services to the right level at the best cost
- Resilience**  
Meets future transport needs and endures shocks
- Safety and responsibility**  
Reduces harm from transport
- Defining outcomes**  
Identifies and defines the outcome to pursue
- Assessing outcomes**  
Identifies how the outcomes might be best assessed
- Delivering outcomes**  
Identifies the best intervention[s] to secure improvements or to close any gaps to the desired state
- Balancing outcomes**  
Identifies the appropriate balance and trade-off between outcomes and efforts
- Impact**  
Assessing the extent to which current knowledge can be advanced
- Breadth of applications**  
Assessing the extent to which the new knowledge can be spread and absorbed across the wider sector and applications to help build sector capability
- Access to the right resources**  
Assessing whether there is access to the right capacity, capability, tools, data, systems and financial resources [eg through better sector integration] to close the knowledge gap
- Strategic value**  
Assessing whether the new knowledge can be used to help address the strategic issues faced by the sector
- Knowledge potential**  
Size and breadth of benefits
- Probability of success**  
Extent to which the new knowledge can be translated into tangible outcomes