Implementing the Transport Domain Plan and Transport Research Strategy

August 2016
The transport sector is changing the way it identifies and fills knowledge gaps

Government’s overall goal

- strategic direction
- transparency
- collaboration

- common frameworks
- cultural changes

Transport sector outcomes

Data and information outcomes

Research Strategy
Domain Plan
Information Strategy and Architecture
What are TDP & TRS?

Transport Domain Plan

Goal
To ensure the right transport statistics and information are collected and shared efficiently and effectively to maximise economic and social benefits of the transport system and minimise harm.

Content
It provides a macro-level review of the data, statistics and information needed to understand our transport system for better decisions.

Transport Research Strategy

Goal
To create a research environment with the capacity and capability to ensure transport research maximises economic and social benefits of the transport system and minimises harm.

Content
It provides guidance to answer three questions:
• Why do the research?
• What is the right research?
• How should the research be done?
What’s changed?

• Investigate data and research gaps and priorities at the same time
• Apply the same analytical frameworks and approaches
  – knowledge themes
  – knowledge development and prioritisation framework (the Triple-4 framework)
• Utilise a common implementation channel – Transport Knowledge Hubs
Today’s focus

• Knowledge themes, needs and priorities

• The Triple-4 framework

• Implementation channel - Transport Knowledge Hubs and how it works
Knowledge themes, needs and priorities
Knowledge themes and needs

User behaviour and needs
Transport choices and preferences of users, communities and society

Transport impacts
The size, exposure, valuation, interactions and influences of social, economic and environmental impacts

System planning and management
How users make transport decisions by mode, location and industry and how to measure monetary and non-monetary benefits and costs

Future funding and charging
How costs are distributed, how users respond to cost and price changes, impact of technology and user needs
Research priorities

User behaviour and needs
- Reasons for travel and non-travel choices
- Behaviour during travel
- Value of transport benefits to society
- Impacts on transport use due to changes

Transport impacts
- Quantification and valuation of relationships between transport and harms, health, land use and the economy
- Measurement of distributional impacts
- Environmental impact framework

System planning and management
- Effectiveness and efficiency of interventions and their interactions with technologies
- Relationship between interventions and impacts at a system level
- Monetary and non-monetary returns on investment

Future funding and charging
- Where and how costs and benefits of transport are borne
- Impacts of technology on funding
- Impacts of technology on charging systems
Statistical priorities

- **User behaviour and needs**
  - Freight efficiency measures
  - User behaviours and preferences
  - Understand Māori views and needs from transport
  - Improve access to and collection of travel information for all modes

- **Transport impacts**
  - Health and safety risk profiles
  - Improve economic modelling and establish baseline assumptions
  - Measurement of environmental effects
  - Transport emission profiles

- **System planning and management**
  - Measures of accessibility
  - Improve measures of national freight demand
  - Measures of road capacity and utilisation
  - Geospatial tracking movement of vehicles and people
  - Land use and transport network data

- **Future funding and Charging**
  - Information on cost of providing, operating and maintaining the transport network of all modes
Triple-4 knowledge development and prioritisation framework
Applying the Triple-4

i. Define the purpose of a knowledge development initiative

ii. Clearly define the problem or opportunity for research and/or data

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 in achieving long-term sector outcomes**

2. Identifies the **nature of the knowledge gap**

3. **Assesses the priority** of knowledge needs by applying four tests to assess the relative priorities
Step 1: Identify knowledge gaps

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
Step 2: Identify the nature of the gap

- **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) for improvements or close gaps to desired state
- **Balancing outcomes**: Identifies the appropriate balance and trade-off between outcomes and efforts
Step 3: Assess priority - Knowledge Potential

**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 knowledge need is?

**Breadth of applications**
- Will the knowledge gained be accessible across the sector?
- Can the knowledge be used flexibly and applied in different situations?
Step 3: Assess priority - Probability of success

Access to right resources
► Are we able to access the skills, capability, 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?

Strategic value
► Can the knowledge gained help to address the strategic issues faced by the sector?
► Is this the right time considering the strategic issues?
Implementation channel – Transport Knowledge Hubs
Transport Knowledge Hubs

identify and fill knowledge gaps
facilitate collaboration
enable visibility

e.g. Environment HUB

Cross-agency governance COMMITTEE

Administrator

Research BOARD

Evidence and Analytics BOARD

Information Management BOARD

Aviation HUB

Technology HUB

Forecasting HUB

Economics HUB

Safety HUB

Household travel HUB

Other HUB

Transport Knowledge Hub
Decision-making process

- Knowledge Hubs prepare recommendations to Decision Boards
- Decision Boards consider these and prepare recommendations to the CAGC
- The CAGC considers the recommendations and makes decisions
TKH governance

Members

• Ministry of Transport
• New Zealand Transport Agency
• Civil Aviation Authority
• Maritime New Zealand
• Ministry of Business, Innovation and Employment
• NZ Treasury
• Local Government NZ
• Auckland Transport
• IPENZ Transportation Group
• Automobile Association
• Universities NZ

Purposes

• understanding and meeting transport knowledge needs
• considering wider context
• ensuring information and knowledge diffusion
Time table

<table>
<thead>
<tr>
<th>Dates</th>
<th>Call of research ideas</th>
<th>Due date for submission of research ideas</th>
<th>Programme development workshop</th>
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</thead>
<tbody>
<tr>
<td>30 August 2016</td>
<td></td>
<td>14 September 2016</td>
<td>16 September 2016</td>
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Please email knowledgehub@transport.govt.nz to obtain a Research ideas assessment form.
Both publications, a summary documents and work examples of the Triple-4 framework are available for download from:

www.transport.govt.nz/research

For more information, email knowledgehub@transport.govt.nz

THANK YOU QUESTIONS?