

THE NEW ZEALAND

# TRANSPORT EVIDENCE BASE STRATEGY

TEBS  
**Progress Report**  
July 2019

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# INTRODUCTION

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**The Transport Evidence Base Strategy (TEBS) creates an environment to ensure data, information, research and evaluation play a key role in shaping the policy landscape.**

Good, evidence-based decisions also enhance the delivery of services provided by both the public and private sectors to support the delivery of transport outcomes and improve wellbeing and liveability in New Zealand.

Preparation of an annual report on progress of implementing TEBS is the responsibility of the Ministry of Transport. This, the first TEBS Annual Progress Report provides an update on progress in implementing the Transport Domain Plan (Domain Plan) and Transport Research Strategy (Research Strategy) originally published in 2016 and now superseded by TEBS.

The report will provide an overview on:

1. Implementation of the Domain Plan 2016 and Research Strategy 2016-2020 overarching initiatives
2. Domain Plan (2016) recommended initiatives

# REVIEW OF OVERALL PROGRESS TO DATE

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**A key enabler to ensure the success of TEBS is to ensure data, research and evaluation programmes and activities are visible.**

Following release of the Domain Plan and Research Strategy a number of initiatives have been undertaken to improve visibility of data, information, research and evaluation activities. These are summarised in Table 1.

**TABLE 1: OVERARCHING ACTIVITIES**

Initiative	Description
Increase visibility of data and information	<p><u>Government transport data is more visible, examples include:</u></p> <p><u>Ministry of Transport (MoT):</u></p> <ul style="list-style-type: none"> <li>› The <a href="#">Transport Dashboard and Indicators</a> was released in 2018 and will eventually replace the Transport Monitoring Indicator Framework (TMIF).<sup>1</sup></li> <li>› The <a href="#">Transport Outlook</a> <i>Current State</i> and <i>Future State</i> reports and resources were released in 2017. Future updates to the Transport Outlook: Current State will be included in the Transport Dashboard and Indicators.</li> </ul> <p>KiwiRail's <a href="#">Open Data Portal</a> includes rail track centreline and associated attribute data (ie.km pegs and bridges)<sup>2</sup></p> <p>NZ Transport Agency's <a href="#">Open Data Portal</a> includes roading, crash, motor vehicle registration and driver licensing data<sup>3</sup></p>

<sup>1</sup> The initial release includes the first 5 indicators topics (household travel, road transport, public transport, walking & cycling, domestic freight, air passenger and freight, maritime and ports). The remaining topic, environment and health, will be migrated to the new dashboard in early 2020: <https://www.transport.govt.nz/mot-resources/transport-dashboard/>

<sup>2</sup> <http://data-kiwirail.opendata.arcgis.com/datasets>

<sup>3</sup> <https://www.nzta.govt.nz/planning-and-investment/transport-data/data-and-tools/>

<b>Transport Knowledge Hub</b>	<p>Initiatives include:</p> <ul style="list-style-type: none"> <li>› <a href="#">Transport Knowledge Hub</a> governance established and includes 9 individual Topic Hubs, a Decision Board and the Cross-Agency Governance Committee (CAGC) who meet regularly (refer Appendix 5).</li> <li>› The Ministry of Transport maintain a knowledge hub community with cross sector membership. The community currently includes over 650 members from central &amp; local government, private sector, academia and non-government.</li> <li>› <a href="#">Transport Research Register</a> – contains information on research projects currently underway or recently completed and is updated periodically.</li> <li>› <a href="#">Transport Intelligent Digest</a> – publication with a summary of transport-related research, data articles and relevant releases to knowledge hub members. Updated bi-monthly.</li> <li>› Knowledge hub holds regular events and seminars – these aim to advance the sector's knowledge in a range of transport topics. Presentations from events are available on the Ministry of Transport <a href="#">website</a>.</li> <li>› <a href="#">Transport Knowledge Conference</a> – annual conference for the transport sector to connect, communicate and share transport related projects, research and ideas. This was first held in Wellington in 2014 with 155 attendees and has grown in numbers each year, with more than 240 people attending the 5<sup>th</sup> annual Transport Knowledge Conference in November 2018.</li> </ul>
<b>Chief Science Adviser</b>	Appointment of the Ministry of Transport Chief Science Adviser in early 2018 to improve connection between research, science and policy.
<b>Chief Economist</b>	MoT has recently employed a Chief Economist to enhance the Ministry's economic analysis, advice and policy capability.
<b>Evaluation Strategy</b>	An Evaluation Strategy has been developed for the New Zealand transport sector for the first time. This Strategy has been embedded into the draft <i>New Zealand Transport Evidence Base Strategy</i> .

<b>Improved international connections</b>	<p>Recent activities include:</p> <ul style="list-style-type: none"> <li>› Ministry of Transport representative on the board of the Australasian Transport Research Forum (ATRF).</li> <li>› <u>In 2017, the 4th annual Transport Knowledge Conference was combined with the 39th ATRF conference, attracting over 250 domestic and international attendees. The combined event was followed by an International Transport Forum (ITF) (part of the OECD) roundtable, held for the first time in New Zealand<sup>4</sup>.</u></li> <li>› The Ministry of Transport is a member of the ITF Transport Research Centre and is actively involved in the development of ITF's multi-year work programme.           <ul style="list-style-type: none"> <li>› Ministry of Transport has provided staff support to ITF on two projects developed by other countries. These include <u>Zero value of travel time (Roundtable)</u> and <u>Smart Use of Roads (Workshop)</u><sup>5</sup>.</li> <li>› For the 2016-2019 work programme, New Zealand has 2 successful proposals, with one proposal currently being reconsidered for 2020-21, and has submitted a further 7 project proposals for consideration for the 2020-2021 work programme.</li> </ul> </li> </ul>
<b>Develop research capacity and capability</b>	<ul style="list-style-type: none"> <li>› The inaugural <u>Transport Research Colloquium</u> was held in November 2018 and attended by more than 60 people representing the academic, public and private sector research community. Planning is underway for the 2<sup>nd</sup> Colloquium on 6<sup>th</sup> December 2019.</li> <li>› MoT Academic secondment with Debbie Hopkins, Associate Professor in Human Geography, University of Oxford from 2017-2019. Report (pending) on the <i>Academic Research and Policymaking for Transport: Insights from Aotearoa New Zealand</i>.</li> </ul>

<sup>4</sup> The *Social impacts of time- and space-based road pricing* roundtable topic meeting held in Auckland 30 November to 1 December 2017.

<sup>5</sup> The Summary and Conclusion reports and related Discussion Papers are scheduled to be published in early 2019.

# DOMAIN PLAN (2016) RECOMMENDED INITIATIVES

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The Domain Plan 2016 identified 9 overarching initiatives and 23 high-priority data, information and research initiatives<sup>6</sup>. Progress on implementing these is in Table 2 below.

**TABLE 2: DOMAIN PLAN HIGH-PRIORITY RECOMMENDED INITIATIVES**

Ref. No.	Description	Current Status
H7	Review the Transport Indicator Framework	Completed – these have been replaced with the new <a href="#">Transport Dashboard and Indicators</a>
H5	Improve transport sector information governance	Established the knowledge hub governance structure– this ensures representation in implementation of the Transport Evidence base at operational, management and executive levels.
H1 E	Review the content of the 2015 Transport Domain Plan stocktake and investigate the best way to publish and update the information	There have been no further updates to the stocktake since this was released in March 2017. Recommendation in TEBS to replace this with a new initiative to ensure alignment with action to ‘publish inventories of data held by government agencies, and ensure they are maintained’ in the New Zealand Open Data Action Plan <sup>7</sup> .

<sup>6</sup> These are the top 23 high-priority initiatives originally identified from the Domain Plan [Full List of Recommended Initiatives](#)

<sup>7</sup> <https://www.data.govt.nz/assets/Uploads/NZ-open-data-action-plan-Nov2018.pdf>

H9	Enhance transport sector information systems to enable management of significant volumes of network level data that will be generated by intelligent transport systems	<p>Release of the:</p> <ul style="list-style-type: none"> <li>▶ <a href="#">Data Opportunities for intelligent mobility</a> in July 2016, the Ministry of Transport.</li> <li>▶ <a href="#">ITF Report</a> on shared mobility in Auckland</li> </ul>
R1.1 E	Regularly publish vehicle fleet profiles, across <u>all modes</u> (includes R1.4, R1.8, R1.9, R1.10 and R1.11)	<p>In progress – Vehicle Fleet</p> <p>MoT publish annual and quarterly fleet stats on the <a href="#">Transport Dashboard and Indicators</a></p> <p>NZTA publishes further data about the <a href="#">vehicle fleet</a></p> <p>Unsure of progress for other modes – further investigation required</p>
R2.1	Improve awareness of and access to information from the New Zealand Household Travel Survey*	<p>Completed/ongoing progress</p> <p>2015-2018 Household Travel Survey information published on website (<a href="https://www.transport.govt.nz/mot-resources/household-travel-survey/new-results/">https://www.transport.govt.nz/mot-resources/household-travel-survey/new-results/</a>) and material presented at Transport Knowledge Conferences.</p>
R2.4	Establish baseline information on ‘accessibility’	<p>In progress – early stages</p> <ul style="list-style-type: none"> <li>▶ NZTA research topics being considered in this area</li> <li>▶ NZTA is developing initial accessibility baseline measures</li> </ul>
R2.6	Improve access to high-quality public transport patronage data	<p>Partial progress</p> <ul style="list-style-type: none"> <li>▶ NZTA have an aggregated view of this data, but more detail is required.</li> </ul> <p>NZTA research report published (Apr 2018) on “Developing a national measure for predictable public transport: bus, rail and ferry” <a href="https://www.nzta.govt.nz/resources/research/reports/641">https://www.nzta.govt.nz/resources/research/reports/641</a></p>
R2.8 E	Gather additional information on people’s attitudes, preferences and perceptions about	<p>In progress.</p> <ul style="list-style-type: none"> <li>▶ Household Travel Survey:</li> </ul>

	transport (including research on why people don't (or can't) travel (R2.7))	<ul style="list-style-type: none"> <li>› Introduced question around reasons for not travelling on given travel day from 2018 onwards (R2.7).</li> <li>› Panel survey on attitudes to a range of transport areas, from autonomous vehicles/electric vehicles, shared mobility, public transport and active modes completed/scheduled. Reports on some available from <a href="https://www.transport.govt.nz/mot-resources/household-travel-survey/panels/">https://www.transport.govt.nz/mot-resources/household-travel-survey/panels/</a> (R2.8).</li> <li>› NZTA research topics being considered in this area.</li> <li>› NZTA Customer Journey Monitor (regular online survey) measures experience of most recent journey (mode neutral) in the last week across a range of attributes and captures beneficial journeys that were not taken and high level reasons why.</li> </ul>
R2.13	Gather additional information about pedestrian and active mode person travel (walking and cycling)	<p>In progress</p> <ul style="list-style-type: none"> <li>› Attitudes toward active modes are included in the Ministry of Transport Household Travel Survey panel survey.</li> <li>› NZTA research project underway on “Factors affecting cycling levels of service” and further topics being considered in this area.</li> <li>› NZTA literature review considering the “Pedestrian Experience” published: <a href="https://www.nzta.govt.nz/assets/resources/the-pedestrian-experience/The-pedestrian-experience-literature-review.pdf">https://www.nzta.govt.nz/assets/resources/the-pedestrian-experience/The-pedestrian-experience-literature-review.pdf</a></li> <li>› NZTA updated 2019 research on attitudes and perceptions of walking and cycling to be published by August 2019.</li> <li>› University of Auckland research being undertaken on the impact of the new Kamo Shared Path in Whangarei on active travel to school due June 2019.</li> </ul>
R2.14	Improve information on and understanding of Māori views and needs from, use of, and involvement in transport	No progress

R3.2	Develop an agreed approach and set of indicators for monitoring freight efficiency	<p>In progress:</p> <ul style="list-style-type: none"> <li>▸ Research into road freight Indicators has been published: <a href="https://www.nzta.govt.nz/assets/resources/651/651-Identifying-freight-performance-and-contextual-indicators.pdf">https://www.nzta.govt.nz/assets/resources/651/651-Identifying-freight-performance-and-contextual-indicators.pdf</a></li> <li>▸ NZTA research project underway considering “Valuing time and reliability for freight transport beyond the allocation of marginal vehicle and driver utilisation costs”</li> <li>▸ NZTA research report published (Dec 2018) on “Identifying freight performance and contextual indicators” <a href="https://www.nzta.govt.nz/resources/research/reports/651/">https://www.nzta.govt.nz/resources/research/reports/651/</a></li> <li>▸ NZTA research report published (Sept 2017) System dynamics investigation of freight flows, economic development and network performance <a href="https://www.nzta.govt.nz/resources/research/reports/629">www.nzta.govt.nz/resources/research/reports/629</a></li> </ul>
R3.6 E	Develop geospatial capability to track freight and people movements. This includes establishing data partnerships with freight operators (R3.6) and develop approach for collecting data on people movements (R1.15)	<p>Partial progress</p> <ul style="list-style-type: none"> <li>▸ NZTA research published (Aug 2017) “Use of technology to measure and improve freight movements” <a href="https://www.nzta.govt.nz/resources/research/reports/625">https://www.nzta.govt.nz/resources/research/reports/625</a></li> </ul>
R3.9 E	<p>Improve collection and access to data about the movement of freight. This includes:</p> <ul style="list-style-type: none"> <li>▸ repeat and enhance the National Freight Demand Study (R3.9)</li> <li>▸ domestic air freight (R3.10)</li> <li>▸ Cook Strait freight and rail operators (R3.12 and R1.12)</li> <li>▸ - unrecorded light and urban freight (R3.5 and R3.7)</li> </ul>	<p>Partial progress:</p> <ul style="list-style-type: none"> <li>▸ National Freight Demand Study was last undertaken in 2014. Whilst this study hasn't been repeated since this date, the results have been enhanced through the Transport Outlook Future State, with model results available for use: <a href="https://www.transport.govt.nz/mot-resources/transport-outlook/">https://www.transport.govt.nz/mot-resources/transport-outlook/</a>. <u>Potential that this study may be undertaken again in the future.</u> <u>Note:</u> the Future State modelling work includes freight out to 2055.</li> <li>▸ Movement of rail freight data published quarterly: <a href="https://www.transport.govt.nz/mot-resources/freight-resources/figs/rail/">https://www.transport.govt.nz/mot-resources/freight-resources/figs/rail/</a></li> <li>▸ NZTA research report published (Aug 2017) looking at the “Use of technology to measure and improve freight movements”:</li> </ul>

		<a href="https://www.nzta.govt.nz/resources/research/reports/625">https://www.nzta.govt.nz/resources/research/reports/625</a>
R4.1 E	Research into the monetary and non-monetary returns on investment in transport infrastructure at a network level (this combines with recommended initiative R4.18)	<p>Partial progress</p> <p>NZTA research project underway considering “Valuing time and reliability for freight transport beyond the allocation of marginal vehicle and driver utilisation costs”</p>
R4.14	Integrate road assessment and maintenance management (RAMM) data and improve its access <sup>8</sup>	<p>Partial progress</p> <ul style="list-style-type: none"> <li>‣ <a href="#">NZTA National Road Centreline</a> includes attributes from RAMM data (for use by NZTA and MoT only). A version with limited attributes has been released publically for non-commercial use.</li> <li>‣ NZTA research report published (Feb 2018) on Network and asset management: benefits of real-time data <a href="https://www.nzta.govt.nz/resources/research/reports/638">https://www.nzta.govt.nz/resources/research/reports/638</a></li> <li>‣ NZTA research report published (September 2017) on Data standards for the NZ transport network <a href="https://www.nzta.govt.nz/resources/research/reports/627">https://www.nzta.govt.nz/resources/research/reports/627</a></li> <li>‣ NZTA research report published (Dec 2017) providing “Analysis and interpretation of New Zealand long-term pavement performance data” <a href="https://www.nzta.govt.nz/resources/research/reports/633">https://www.nzta.govt.nz/resources/research/reports/633</a></li> </ul>
R4.19	Improve information on the capacity and use of local roads	<p>Partial progress – further investigation required</p> <ul style="list-style-type: none"> <li>‣ MoT VKT for state highways and local roads included in the <a href="#">Transport Dashboard and Indicators</a></li> </ul>

<sup>8</sup> \* indicates that this initiative is ‘in progress’ (as per feedback received during refresh workshop) but more information is required to support this

R5.1	Develop sector definition of resilience and security, and measurements	<p>In progress.</p> <ul style="list-style-type: none"> <li>‣ A draft Transport Strategic Resilience Framework has been agreed with transport agencies; the Framework includes a high level vision, outcomes etc. It has been endorsed by the Transport Sectors Leaders (TSL).</li> <li>‣ NZTA research report published (April 2017) on “Establishing the value of resilience” puts forward a definition <a href="https://www.nzta.govt.nz/resources/research/reports/614">https://www.nzta.govt.nz/resources/research/reports/614</a></li> <li>‣ Further NZTA research topics being considered in this area.</li> <li>‣ Various frameworks on transport security are currently being developed.</li> </ul>
R5.2	Integrate transport system and land use data for improved land use planning	<p>In progress</p> <ul style="list-style-type: none"> <li>‣ NZTA research report published (Jan 2018) looking at “The future of employment and economic activity and its transport and land use implications” <a href="https://www.nzta.govt.nz/resources/research/reports/637">https://www.nzta.govt.nz/resources/research/reports/637</a></li> <li>‣ Further NZTA Research topics and a AustRaods research proposal being considered in this area.</li> </ul>
R6.2 E	<p>Improve information on the cost of providing, operating and maintaining the transport network. This includes access to:</p> <ul style="list-style-type: none"> <li>- data on the rail network (R6.8)</li> <li>- developing a transport infrastructure performance benchmarking tool or framework (R4.4).</li> </ul>	<p>Partial progress</p> <ul style="list-style-type: none"> <li>‣ NZTA research report published (Nov 2017) looking at “Benefits and costs of different road expenditure activities” (covers road operations, maintenance and renewal, and minor work improvement) <a href="https://www.nzta.govt.nz/resources/research/reports/631">https://www.nzta.govt.nz/resources/research/reports/631</a></li> <li>‣ NZTA research report published (Jan 2017) looking at “Benchmarking the operations and maintenance of New Zealand’s roading sector” <a href="https://www.nzta.govt.nz/resources/research/reports/605">https://www.nzta.govt.nz/resources/research/reports/605</a></li> <li>‣ Austroads report published (Nov 2018) “Measuring and reporting the value of road maintenance and renewal works” <a href="https://austroads.com.au/publications/asset-management/ap-r588-18">https://austroads.com.au/publications/asset-management/ap-r588-18</a></li> </ul>
R9.2 E	Improve economic modelling oversight (R9.2) and a set of baseline assumptions (R4.2)	<p>Partial progress</p> <ul style="list-style-type: none"> <li>‣ NZTA research project underway – “Next generation New Zealand transport models”.</li> </ul>

R10.1	Develop health and safety risk profiles and exposures that leads to transport-related harm	Unsure of progress – further investigation required
R10.3	Review methods for updating the Value of Statistical Life (VoSL)	<p>Completed</p> <ul style="list-style-type: none"> <li>› A literature review was completed in 2015 to review the methodologies for establishing VOSL, value of travel time (VTT) savings and value of reliability (VOR).</li> <li>› A pilot study was completed in 2018 to test the choice modelling approach to establish VOSL, VTT and VOR in a single survey.</li> <li>› Further work is being scoped to roll out and expand the pilot survey to a full survey to establish new VOSL, VTT and VOR etc.</li> <li>› NZTA research report published (Dec 2018) on a “A pilot study to determine the relative value of non-market transport impacts of investment”</li> </ul> <p><a href="https://www.nzta.govt.nz/resources/research/reports/648/">https://www.nzta.govt.nz/resources/research/reports/648/</a></p>
R10.6	Align injury classification definitions across different datasets	Unsure of progress – further investigation required
R11.1	Research into transport emissions profiles	<p>Partial progress</p> <ul style="list-style-type: none"> <li>› NZTA research project looking at “Fuel use and emissions of light vehicles” is currently underway.</li> </ul>
R11.2	Develop environment impact framework for emissions and infrastructure	<p>Partial progress</p> <ul style="list-style-type: none"> <li>› NZTA research project underway looking at “Establishing a national environmental aspect (activities) and impact register for the transport sector”</li> </ul>
R11.9	Improve environmental impact evaluation around run-off of vehicle pollutants on road	<p>Partial progress</p> <ul style="list-style-type: none"> <li>› NZTA research report published (March 2016) providing a “Risk assessment of road stormwater run-off” <a href="https://www.nzta.govt.nz/resources/research/reports/585">https://www.nzta.govt.nz/resources/research/reports/585</a></li> </ul>

R11.10	Collect information on impacts of weather and environmental-related network outages	Unsure of progress – further investigation required
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