



NZTA Technical Framework and Tactical Goals

Achieving long-term outcomes through Organisational Strategy

Office of the Chief Engineer

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Version 1

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More information

NZ Transport Agency Waka Kotahi
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If you have further queries, call our contact centre on 0800 699 000 or write to us:

NZ Transport Agency Waka Kotahi
Private Bag 6995
Wellington 6141

This document is available on NZTA's website at nzta.govt.nz

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1. Technical Framework

The New Zealand Transport Agency (NZTA) Technical Framework outlines how NZTA will contribute to and deliver on government expectations, considering our organisational strategy “Te Ara ki Tua”, the Transport Outcomes Framework, and the Government Policy Statement for Land Transport (GPS) 2024-2034. Both Te Ara ki Tua and the GPS have guided the Framework’s levers, tactical goals and actions, in addition to prioritising activities for delivery in the next 12 - 36 months.

1.1 Purpose

This Framework and its associated action plan set the strategic direction and delivery priorities for NZTA technical requirements and expect innovation across various technical disciplines including standards, procurement, data, technology, and collaboration.

The overarching purposes of the Framework are to:

- Set the engineering and technical direction through contemporary fit-for-purpose operational policies including standards
- Inform and guide both internal NZTA and external professionals, who develop or update operational policies
- Contribute to developing discussion and ideas, and
- Provide visibility and clarity to all end users affected by the technical direction and requirements.

The key purpose of the Framework is to enable the development and prioritisation of actions that expedite the delivery of outcomes to achieve our purpose as expressed by Te Ara ki Tua.

1.1.1 Review and update of the framework

This Framework may be reviewed periodically to reflect any external or internal changes that may impact the ongoing strategic approach to technical requirements for NZTA.

1.1.2 Roles and Responsibilities

The owner of the Technical Framework is the Chief Engineer, who is responsible for developing, updating and maintaining, and withdrawing standards when no longer required or superseded by another framework. The sponsor for the Framework is the National Manager Portfolio and Standards, responsible for assuring that the document has met NZTA’s expectations and is fit-for-purpose for publication.

1.2 Te Ara ki Tua – Our roadmap

Te Ara ki Tua is our organisational strategy and provides a clear and simple roadmap, helping connect the work we do to our wider vision and purpose. It outlines our plans and priorities, and what we need to focus on and deliver.

Our purpose is defined as providing transport networks that deliver for people, places and New Zealand, with a vision of a modern and efficient organisation, focused on delivering our roles.

Acknowledging that Te Ara ki Tua sits within a wider context of what we are legislated to do, the objectives and levers outlined in this Framework also align with the Land Transport Management Act 2003 functions, the Transport Outcomes Framework, and other government strategies or policy as required.

The focus of Te Ara ki Tua is on our roles as stewards of the land transport system, and this Framework supports each of those roles by:

- (i) **Planner** – *Working with others to plan the land transport system, with a focus on the state highway network.*
Through a clear process and collaboration with planning teams, the Framework sets key priorities to ensure planning is effective and efficient, consistent, proactive, integrated, and anticipatory.
- (ii) **Investor** – *Managing the NLTF and investing allocated funds into the land transport system.*
By providing insight into funding allocations and activity priorities, the Framework establishes levers and tactical goals targeting NLTF outcomes.
- (iii) **Regulator** – *Improving safety and reducing harm across the land transport system.*
The Framework defines technical requirements and priorities that underpin safety, risk management, and regulatory compliance.
- (iv) **Deliverer** – *Delivering a significant programme of digital and physical improvements to the land transport system.*
Through levers such as “Standards,” the Framework enables fit-for-purpose requirements that strengthen delivery capability and outcomes.
- (v) **Asset Manager** – *Maintaining and operating the state highway network, New Zealand’s most valuable asset.*
The Framework supports right-sizing technical requirements to maintain and operate the network efficiently, including strategies to extend asset life where appropriate.
- (vi) **Customer Service Provider** – *Providing core services to access, pay for, and use the land transport system.*
By listening to customers and stakeholders, the Framework reinforces a strong and engaged customer focus through the lever “Collaboration and Influencing.”

1.3 Alignment to government direction

1.3.1 Transport Outcomes Framework

The Ministry of Transport’s Transport Outcomes Framework outlines the five core outcomes: inclusive access, healthy and safe people, economic prosperity, environmental sustainability, and resilience and security to deliver a transport system that improves wellbeing and liveability.



Figure 1 Transport Outcomes Framework (Source: <https://www.transport.govt.nz/>)

The long-term outcomes outlined in the Transport Outcomes Framework (Figure 1) provide the foundation for setting our technical direction approach, tactical goals, actions and work programmes.

The disciplines identified within the framework: Environmental Sustainability, Geotechnical, Multi Modal and Urban Design, Pavements, Resilience, Road Safety and Structures will each contribute to at least one of the system outcomes above.

Work is currently under development focusing on a synthesis of key targets and outcomes expected from the Transport Outcomes Framework and related government directions and policy statements (refer to “2050 Long-Term Targets-Led Strategic Direction for Technical Requirements and Standards”, in development by the OCE).

1.3.2 Government Policy Statement on Land Transport (GPS) 2024-34

GPS 2024 serves as a short-medium term expression of government aspirations for the transport system and consequently provides a lens through which each discipline’s approach is shaped and refined, helping to identify tactical goals that accelerate progress towards the Government’s key strategic priorities: Economic Growth and Productivity, Increased Maintenance and Resilience, Safety, and Value for Money.

This Framework has undertaken a process to define levers and tactical goals that align with and progress both the long-term system outcomes and the GPS. The short-term work programmes – spanning 12 – 36 months – are primarily shaped by the GPS and reflect each disciplines’ commitment to delivering on these priorities.

1.4 Technical Framework in a nutshell

Figure 2 provides an illustration of how different parts of the Technical Framework give effect to achieving the overall objectives, from the foundations of our Organisational Strategy (Te Ara ki Tua), Transport Outcomes Framework, and GPS.



Figure 2 Technical Framework in a nutshell

1.5 Technical Framework Objectives

The key objectives of this Technical Framework are the following:

- (i) Establishing and maintaining **technical authority** to provide a unified voice for NZTA technical and operational policy.
- (ii) Establishing a clear understanding of risks which enables the **management of risk and opportunities** for improved efficiency and productivity.
- (iii) Encouraging, sharing and enabling **innovation and technology**, while being open to ideas for improvements and step changes.
- (iv) **Promoting an integrated and holistic approach** in system planning, design, maintenance, operations and asset management for the communities and the environment.

- (v) **Providing leadership and engagement** for a healthy thriving sector, which allows us the ability to look forward to influence and working collaboratively
- (vi) **Supporting capability and development of the sector**

1.6 Step changes

To meet the Framework's objectives outlined above we have identified the six step changes that are required as aligned to our simplification programme NZTA MOVE as illustrated in Figure 3.

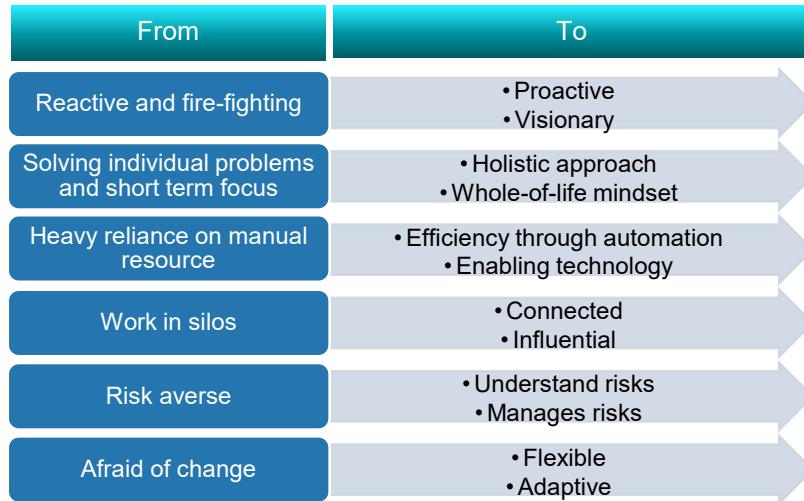


Figure 3 Move from current state to the future state

1.7 Levers

There are five levers (areas of activity that we can control or strongly influence) in this Framework that underpin and guide our technical approach. Each lever has several tactical goals to be delivered to achieve the desired step changes required to ensure that we achieve the Framework's objectives. The levers are as follows:

1.7.1 Standards

Standards are considered a key lever because, when done well, they will communicate NZTA's requirements clearly and concisely, while removing ambiguity.

They should be **easily accessible** and applicable for our suppliers. They should have clear **processes for development, application and maintenance**.

We recognise the importance of **documenting departures from standard practices**, allowing for transparency, consistency in decisions and continuous improvement.

We pursue a clear **hierarchy of standards** enabling transparent decision-making, balancing consistency with innovation.

Depending on the context, we adopt either a **flexible first approach** - encouraging adaptability and experimentation - or a **standardise first approach**, which promotes uniformity and efficiency across our roles such as planner, investor, deliverer and asset manager. This dual-path strategy empowers delivering high-quality solutions underpinned by sound principles.

To this effect, a **Standards Strategy** for NZTA is currently being developed.

1.7.2 Collaboration and influence

Our engagement with the sector is built on a foundation of active listening, openness and meaningful collaboration, guided by regular **sector pulse checks** to stay attuned to emerging needs and opportunities, learnings and trends.

We prioritise **valuing and maintaining sector networks**, recognising their role in fostering trust, knowledge sharing, and a common understanding of outcomes.

A clear **priority for engagement** ensures that interactions are purposeful and aligned with strategic goals, while **communities of interest** provide dynamic spaces for targeted dialogue, growth and innovation.

To support this, we continuously collaborate in building **capability and capacity**, enabling our teams and partners to engage effectively and sustainably across all levels.

1.7.3 Procurement and investment

Our approach to procurement is grounded in a clear **separation of contract requirements and standards**, ensuring transparency and accountability throughout the delivery lifecycle.

We remain **aware of investment and procurement processes and engage at the right time**, aligning our efforts with strategic priorities and funding cycles.

We strive to provide the **right capability at the right time**, supporting project delivery and asset managers with the technical authority they need to succeed.

This is achieved through a **balanced approach** that considers both flexibility and consistency.

By taking on the **lessons of the past**, we build knowledge and avoid repeating missteps.

Our **national approach to smarter logistics** promotes efficiency and sustainability across regions, while procurement becomes a key enabler of innovation, knowledge sharing, and collaboration, driving continuous improvement across the sector.

1.7.4 Data and insights

We recognise the importance of data and insights for excellent operation and delivery, continuous improvement and accelerating the achievement of our outcomes.

Our data and insights lever is underpinned by a robust **monitoring and reporting programme**, ensuring transparency and continuous improvement.

We foster **blue sky thinking** by staying alert to emerging innovations and integrating them where they add value.

A **central and open access** model supports equitable data sharing, while a commitment to talking the same language through **nationally consistent data** standards like AMDS ensures clarity and interoperability.

We treat **data as a strategic asset**, maintaining it to a high standard and ensuring it is **well maintained** and reliable.

A **centralised and well-developed research** approach drives evidence-based decision-making, and we invest in **advanced collateral** to support knowledge dissemination and sector-wide learning.

1.7.5 Technology

We are committed to being aware of and **exploring design and operational policy opportunities** that drive smarter, more efficient infrastructure outcomes.

By leveraging **predictive models and smart infrastructure** management technology through AI, we can anticipate needs, optimise performance, and reduce lifecycle costs.

A **centralised approach to awareness, assessment, evaluation and adoption** ensures that innovations are considered consistently and scaled effectively across the sector.

Technologies such as **digital twins, BIM, advanced modelling, and augmented reality** are at the forefront for the above transformation, enabling immersive planning, real-time insights, and enhanced decision-making.

2. Tactical goals and actions

For each of the key levers tactical goals have been developed, enabling each discipline to identify focus areas and actions to deliver the Framework's objectives (refer Figure 2).

This section presents the tactical goals and related actions for each lever expected to be delivered over the next 3 -10 years.

Each discipline builds on from these tactical goals and actions to develop their roadmaps to collectively achieve the Framework's foundational outcomes. Discipline-specific roadmaps along with work programmes are not included in this document, however, they will be developed, reviewed every 12 months for priority and other organisational requirements, and published for visibility of direction setting.

2.1 Standards

Table 2.1 presents the key tactical goals and actions for the lever Standards.

Note that these tactical goals are from the wider NZTA Standards Strategy (currently in draft), however incorporated here for providing visibility and further details.

One of the key goals of the NZTA Standards Strategy is collaborating with entities that develop standards to achieve the following:

- (i) Leverage from their work programme (such as Austroads, PIARC, and other related bodies) and improve harmonisation of existing published material, while taking a proactive strategic input to future work.
- (ii) Cross-government research and policy development on common outcomes.

Table 2.1 Tactical goals and actions for the lever "Standards"

Tactical Goal #	Tactical goal	Actions
S#1*	Easily accessed; central repository and available online	Work is currently in progress to bring all NZTA standards to a central place. Requires significant collaboration with other groups outside Transport Services.
S#2*	Clear process for development lifecycle of standards and departure request	Existing processes will be reviewed and improved to provide clear directions on life-cycle management of NZTA standards.
S#3*	Hierarchy of Standards to be explicit with NZTA requirements	Work is currently in progress to review naming and numbering convention along with hierarchy of standards.
S#4	Flexible and standardised approach to achieve consistently applied outcomes	Taking on board the lessons and experience from design standardisation, the following are planned: <ul style="list-style-type: none">i. Include additional topics, details, and requirements that will dial-up efficiency with standardisation, including updates to RoNS Standardised Designs.ii. Review of existing Standards and their place in the current organisational strategy and GPS requirements towards providing fit-for-purpose technical requirements. [These

Tactical Goal #	Tactical goal	Actions
		<p>reviews mostly take place as and when required, but as a minimum 3-yearly.]</p> <p>iii. Clear directions, specifications, and mandates.</p>
S#5*	Acceptable risk tolerance that clearly links with Levels of Service and associated technical requirements.	<p>This tactical action is one of the key actions from the NZTA Standards Strategy (currently Draft) and is prioritised because of significant efficiency and effectiveness that can be achieved through clear and consistent directions from NZTA.</p> <p>The key focus areas are the following:</p> <ul style="list-style-type: none"> i. Establish the high-level organisational appetite for technical risks together with sector and professional acceptance for those risks. ii. Provide clear technical requirements that links to various Levels of Service (LoS)
S#6*	Tie standard initiatives to our long-term vision and business objectives through clear linkages, such as discipline / practice tactical responses and related activities.	Work related to this tactical goal is primarily based on the paper “2050 Long-Term Targets-Led Strategic Direction for Technical Requirements and Standards (2025)” and relevant actions resulting from this tactical plan is expected to be reviewed together with the organisational strategy and GPS and updated annually or as required.

2.2 Collaboration and Influence

The lever Collaboration and Influence is mainly focused on maintaining a connected, healthy and sustainable sector, which is critical to deliver our long-term outcomes.

We aim to achieve this through proactive sector engagement by the following tactical goals and actions presented in Table 2.2.

Table 2.2 Tactical goals and actions for lever “Collaboration and influence”

Tactical Goal #	Tactical goal	Actions
CI#1	Thought leadership and culture of influencing	<ul style="list-style-type: none"> i. Lead and engage to develop innovative ideas, including research opportunities, through technical societies, research platforms and knowledge hubs. ii. Widen exposure with Austroads and establish connections with similar international entities to identify commonalities and solve shared challenges. iii. Establish a cross-government group to harmonise research, development, and guidance for land transport infrastructure. iv. Disseminate NZTA positions on key technical issues through including attending and presenting at local conferences, workshops, and other relevant sector events.

Tactical Goal #	Tactical goal	Actions
CI#2	Support sector to develop and maintain capability, capacity and competency	<ul style="list-style-type: none"> i. Engage with NZ universities and tertiary institutions to identify and influence university curricula and connect with students to influence their development. ii. Engage and support the sector to identify gaps and facilitate capability building, including training opportunities. iii. Establish a learner-led ecosystem where NZTA, professional bodies and institutes deliver training needs. iv. Assist with development of a competency framework to support sector developing capability and capacity including upskilling.

2.3 Procurement and Investment

Table 2.3 presents the key tactical goals and actions for the lever Procurement and Investment to achieve our objectives and vision.

Table 2.3 Tactical goals and actions for the lever “Procurement and Investment”

Tactical Goal #	Tactical goal	Actions
PI#1	Clear articulation of NZTA technical requirements	<ul style="list-style-type: none"> i. Identifying opportunities to improve clarity and consistency, including addressing any gaps, in our technical requirements. ii. Improvements to our current technical review process towards efficiency and effectiveness
PI#2	Proactively engaged at the right time for advice	<ul style="list-style-type: none"> i. Embed technical authority within NZTA and provide timely advice for decision making. ii. Contribute to and support investment activities to respond to statutory reform context. iii. Develop processes for investment identification and prioritisation of our networks.

2.4 Data and Insights

Tactical goals and actions for lever Data and Insights (Table 2.4) is to provide requirements that utilise fit-for purpose data, information and research to support evidence-based decision-making.

Table 2.4 Tactical goals for Data and Insights

Tactical Goal #	Tactical goal	Actions
DI#1	Monitoring implementation and performance reporting	This tactical goal focuses on managing implementation and assessing the efficiency and effectiveness of technical standards in supporting various NZTA roles by undertaking the following actions:

Tactical Goal #	Tactical goal	Actions
		<ul style="list-style-type: none"> i. Collect data to enable risk-based decision making for existing assets. ii. Enable a digital platform to receive, record and communicate ideas to aid projects and standards maintenance and development. iii. Enable setting up the foundation for digital and geospatial information platforms for all standards. iv. Continue to support technical aspects of Statement of Performance Expectation metrics measurement, and annual reporting requirements.
DI#2	Identify research and evaluation opportunities with the sector to support standards development	<p>This tactical goal focuses on and enables development of research and evaluation opportunities that support infrastructure delivery activities and/or asset management excellence to assist in understanding of knowledge gaps to enable, refine and develop effective sector standards by undertaking the following actions:</p> <ul style="list-style-type: none"> i. Capture data to enable fit for purpose standards and innovation pathways ii. Forecast research needs, and help shape research programmes and new research opportunities iii. Support pilots, temporary and tactical initiatives as part of an applied research approach iv. Share knowledge, insights and NZTA research with the sector

2.5 Technology

Tactical goals and actions for lever Technology (Table 2.5) considers the use of digital tools and AI, digital twins etc., which can simulate or disrupt, to help predict and manage complex transport needs and the needs of people.

Table 2.5. Tactical goals and actions for lever “Technology”

Tactical Goal #	Tactical goal	Actions
T#1	Technological change and its application	<p>This tactical goal focuses on digital connectivity, and how it could help improve efficiency and effectiveness.</p> <p>Their application spans multiple sectors such as using AI for predictive maintenance in infrastructure, deploying sensors for real-time monitoring, and leveraging data analytics for smarter decision-making, ultimately improving efficiency, safety, and sustainability.</p> <ul style="list-style-type: none"> i. Combination of technology & digital twins to enable smarter decision making for existing assets maintenance and operations. ii. Prepare for AI in standards.
T#2	Taking a centralised approach from	This tactical goal focuses on creating a unified framework that guides the entire lifecycle of technology integration. This involves systematically scanning for emerging technologies, evaluating their

Tactical Goal #	Tactical goal	Actions
	technology awareness to assessment and adoption	<p>relevance and risks, and implementing them consistently across the organisation to ensure efficiency, scalability, and alignment with strategic goals.</p> <ul style="list-style-type: none"> i. Streamline and centralise technology related to the tools and processes specified in the application of standards. ii. Digital platform for standards which enables simpler amendments and tracking of future needs. iii. Technology for e-learning to meet training objectives and reach a wide audience. iv. Use and integrate new technology to monitor and manage real time data for natural hazard events and disruptions.