Arataki

Regional direction
Te Tauihu – Top of the South
September 2023 v1.1

WAKA KOTAHI
NZ TRANSPORT
AGENCY

Te Kāwanatanga o Aotearoa
New Zealand Government

At a glance

Te Tauihu Top of the South covers the prosperous regions of Te Tai o Aorere Tasman, Whakatū Nelson, and Te Tauihu-o-te-Waka-a Māui Marlborough. The population of the three regions will grow from 155,400 to about 175,000 by 2048, or 3% of the country's population.[1] The region is ageing faster than the national average.[2]

The urban area of Whakatū has the highest share of people walking and cycling in Aotearoa New Zealand. Public transport use in the area has doubled in the past five years. A high proportion of journeys to work in the region are by private vehicles with a limited number of bus services available for work travel in Waiharakeke Blenheim.

Road and rail links down the East Coast are critical for the movement of freight and tourism between Waitohi Picton and Ōtautahi Christchurch. The ports in Whakatū and Waitohi play an important role in getting the regions' goods to market.

The coastal communities and transport networks of Te Tauihu are expected to be continually impacted by more frequent and severe weather patterns, particularly in coastal and hilly areas. Seismic risks associated with the Alpine, Waimea, and Wairau Faults are also significant.

During the next three decades, the other critical transport challenges facing the Te Tauihu are safety, resilience, and supporting the transition to a low-carbon economy.

Scale of effort to deliver outcomes in Te Tauihu – Top of the South
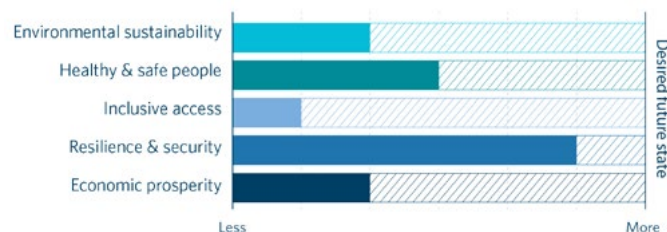
The regional ratings show how Waka Kotahi has assessed the potential scale of effort required in each region to achieve the future desired state for each outcome over the next 10 years. The ratings in each region indicates where effort can be best focused and inform conversations with partners about priority outcomes in each region.
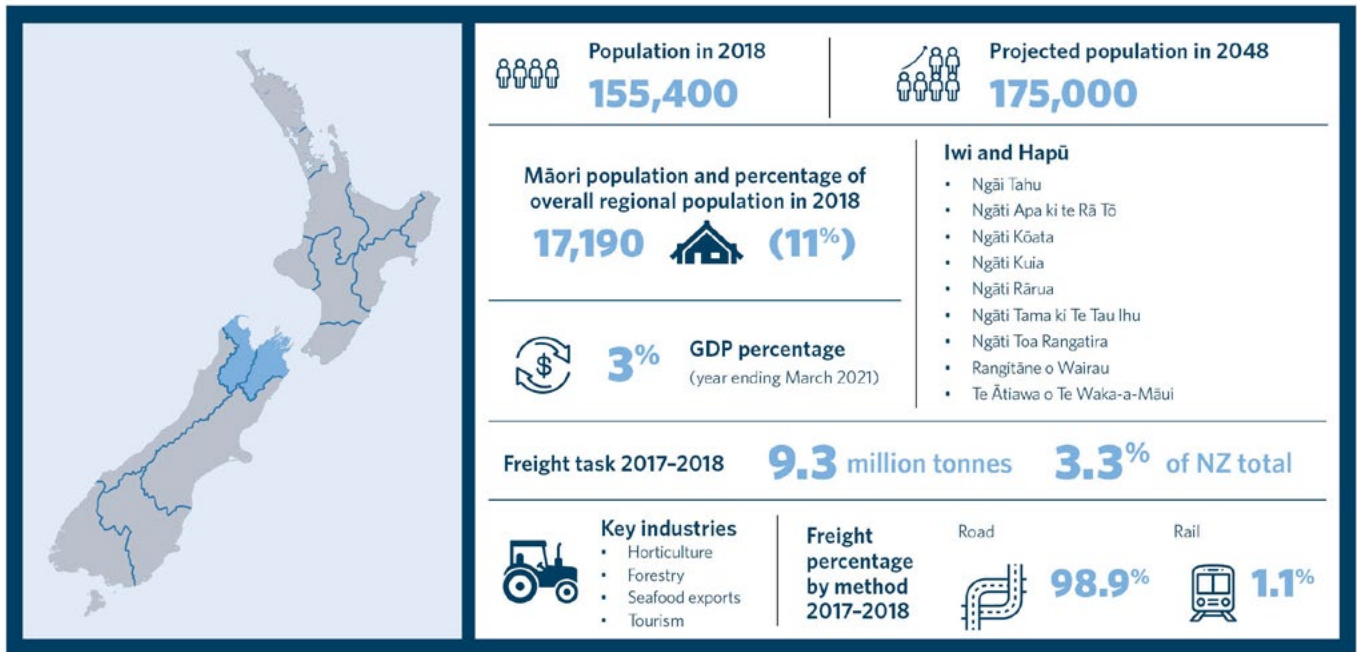
The rating assessments are based on evidence using system levels metrics. Further details are captured in the methodology document.

The September v1.1 release of *Arataki* includes updates to reflect the severe weather events of 2023 and correct minor errors.

Context

Te Tauihu – Top of the South

The population of Te Tauihu Top of the South region (which includes Whakatū Nelson, Te Tai o Aorere Tasman, and Te Tauihu-o-te-Waka-a Māui Marlborough) will grow from 155,400 to about 175,000 by 2048, or 3% of the country's population.[3] The Whakatū urban area (Whakatū to Waimea Richmond) is home to about 70,000 residents. This area straddles the border of the Whakatū and Te Tai o Aorere regions, and will see most of the region's growth.

Recent residential growth in Whakatū has been accommodated in areas to the west and south of Waimea and concentrated in existing residential areas. Most commercial growth is expected in Waimea.

The second largest township of the region, Waiharakeke Blenheim, has a population of just over 31,000.[4]

The population of Te Tauihu is ageing faster than the national average. By 2048, those aged 65 years and over will make up 34% of the region's total, compared to 23% nationally.[5] A greater range of transport options will be needed, supported by new technologies, to ensure all ages have good access to essential services and recreational activities.

The South Island's main trunk line and SH1 provide the key connections for freight and tourism between the ports in Waitohi Picton and Ōtautahi Christchurch. The two transport corridors in Kaikōura are located between high mountain ranges and the sea. Although both corridors re-opened following a major earthquake in 2016, ongoing disruption is expected from landslips, rockfall, and flooding from coastal storms. Network resilience is becoming a significant issue across Te Tauihu, with more frequent disruptions and costly repairs from significant weather events.

Other key connections are the state highway links between:

- Waimea and Motueka
- Whakatū and Waiharakeke
- SH6 to Te Tai o Poutini West Coast.

The ports in Whakatū and Te Tauihu-o-te-Waka-a Māui (Waitohi) play an important role in getting the region's goods to market. The majority of the land-based freight travels by road, as rail opportunities are limited to the South Island main trunk line.

The urban link between Waimea and Whakatū has been identified as a key connection to access employment, goods, and services. The Whakatū urban area transport system is under growing strain because of:

- population growth and the related demands for improved accessibility
- increased freight movements.

In 2018, 17,190 Māori lived in Te Tauihu, making up 11% of the region's population.[6] This is lower than the national rate of 16.5%.[7] Most Māori live in Te Tauihu-o-te-Waka-a Māui, where they make up 14% of the district's population.[8]

The iwi and hapū in Te Tauihu region are Ngāi Tahu, Ngāti Apa ki te Rā Tō, Ngāti Kōata, Ngāti Kuia, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, Ngāti Toa Rangatira, Rangitāne o Wairau, and Te Ātiawa o Te Waka-a-Māui.[9]

Te Ōhanga Māori - The Māori Economy 2018 includes information for the Te Tau Ihu rohe, which relates to Te Tauihu region. It notes that the asset base in these rohe is valued at $1.3 billion.[10] Property is noticeably important.[11]

The economies and communities of the three areas of Te Tauihu are highly interdependent. The Whakatū central business district is the main commercial centre across the region. The Whakatū and Te Tai o Aorere economies focus on horticulture, forestry, pastoral farming, tourism, and seafood exports – Whakatū is the largest fishing port in Australasia.

The district of Te Tauihu-o-te-Waka-a Māui is the largest grape growing region in Aotearoa New Zealand. Viticulture generates high vehicle movements because of the number of workers and visitors. Forestry harvests across the area are expected to increase transport demand.

The area attracts strong tourism and is the gateway to three national parks. Development of the Waimea Community Dam will boost regional productivity and freight demand. The planned Picton Ferry Terminal upgrade will improve rail services by expanding the docks and upgrading the passenger terminal.

The freight task in Te Tauihu (Te Tai o Aorere, Te Tauihu-o-te-Waka-a Māui, and Whakatū) in 2017–2018 was 9.3 million tonnes, or around 3.3% of the country's total.[12] A total of 98.9% of the freight task tonnage in Te Tauihu was moved by road and 1.1% by rail.[13]

Primary sector commodities produced in Te Tauihu, representing 5% of more of the country's total in 2017–18 were:

• Horticulture – 463,000 tonnes, or 16.8% of the country's horticultural production

• Logs – 3.3 million tonnes, or 10% of the country's log harvest.[14]

Te Tauihu – Top of the South: Outlook
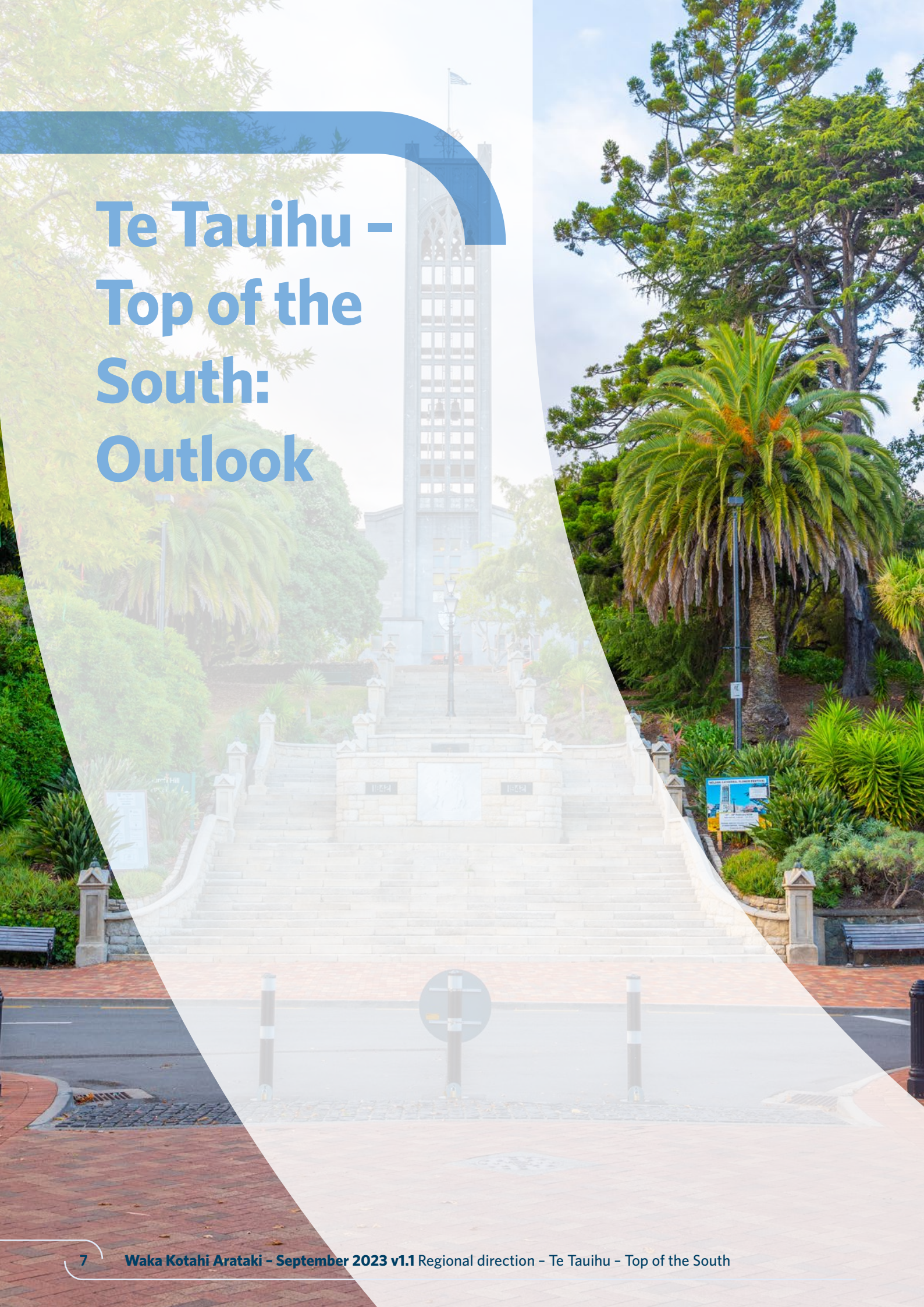
While the population of Te Tauihu Top of the South is projected to grow 13% during the next 30 years, its economy will likely transform considerably as Aotearoa New Zealand transitions to a low-carbon future.

Over the next three decades, key changes to Te Tauihu are:

- supporting the country's economic transformation
- making improvements to safety and resilience
- achieving higher rates of walking and cycling.

The ageing population and higher proportion of residents on fixed incomes is likely to put pressure on the region's ability to:

- maintain existing networks
- fund new infrastructure
- provide appropriate services.

Climate change will make this even harder.

Steps to make progress towards transport outcomes in a more efficient and cost-effective way include:

- renewing focus on small-scale projects and getting more from existing infrastructure
- reallocating existing road space and making temporary or low-cost improvements
- influencing travel behaviour and growth patterns.

Even with these steps, more investment from a wider range of finance and funding sources is required to achieve key goals. New sources should be investigated, especially where these incentivise growth or transport outcomes.

This section uses the *Transport Outcomes Framework* from Te Manatū Waka Ministry of Transport to support a 'decide and provide' approach to proactively plan the desired future state we want to achieve. Key challenges and opportunities are identified and discussed. Then we highlight the most important actions to be taken to make progress on each outcome.

Environmental sustainability

Challenges and opportunities

Te Tauihu will need to make an important contribution to reducing carbon emissions, to reach the 2035 targets set in the government's *Emissions Reduction Plan* and net-zero emissions by 2050.[15]

As the main urban centre, Whakatū Nelson-Waimea Richmond presents the greatest opportunity to support national emissions reductions by providing alternative transport options and reducing the need to travel. This will require a significant change to how people travel in cities with high levels of private vehicle use. This will require an increased focus on:

- effective integration of land-use and the transport system to support mode shift
- reductions in emissions.

Care is required to ensure efforts to reduce vehicle kilometres travelled (VKT) don't unfairly impact specific communities or groups.

The challenge to achieve the required VKT reduction across each area will vary between regions. In Waiharakeke Blenheim, a high proportion of journeys to work are by private vehicle, with a limited number of bus services available.

The Whakatū urban area has the highest share of people walking and cycling in the country. Public transport use has doubled in the past five years. However, further mode shift is hindered by busy arterial routes that sever, or disconnect, communities. This reduces the attractiveness of active modes and leads to public transport delays.

We need to reduce freight transport carbon through:

- adopting lower-emitting fuels
- increasing mode share for rail and coastal shipping.

We must also reduce the impact of the region's transport system on the local environment, especially its impacts on air pollution, waterways, and ecological systems. Contaminated stormwater runoff from roads must be treated before entering waterways. The impact of new and improved transport infrastructure on the natural environment must be appropriately managed.

Making progress

Key actions over the next 10 years to make progress on this outcome are:

- encouraging growth and development that supports compact, mixed-use urban form, reduces trip length, and lessens car dependency
- planning what interventions, activities, and investments are needed to achieve vehicle kilometres travelled (VKT) and emissions reduction
- making changes to the allocation of space on existing roads and streets to enable and increase mode shift to public transport, walking, and cycling
- continuing to improve public transport services and exploring ways technology can deliver better services at lower costs
- identifying opportunities for smaller projects that can improve system outcomes, like getting the most from the existing network
- ensuring appropriate standards, policies, and regulations are put in place to reduce the impact of the transport system on the local environment
- supporting implementation of key policies such as vehicle fleet transformation.

> **Whakatū Nelson-Waimea Richmond presents the greatest opportunity to support national emissions reductions by providing alternative transport options and reducing the need to travel.**

Healthy and safe people

Challenges and opportunities

Te Tauihu Top of the South has a relatively poor road safety record with issues including:

- high-risk intersections
- run-off road crashes
- vulnerable users, like harm to people cycling or walking
- high-risk urban and rural roads
- speeding.[16]

A focus on safety is needed on:

- the urban areas of Whakatū Nelson and Waiharakeke Blenheim
- high-risk rural roads.

Efforts to improve road safety are guided by the *Road to Zero: New Zealand's Road Safety Strategy 2020–2030* and associated *Action Plan 2020–2022*, and regional safety strategies.[17]

While the Whakatū urban area has high numbers of people walking, cycling, and using public transport, the other areas of Te Tauihu should look at developing networks to boost walking and cycling rates.

The harmful impacts of vehicle tailpipe pollutants on health, especially on the respiratory systems of our youngest, oldest, and most vulnerable, are much greater than previously realised.[18]

Significant progress on the healthy and safe people outcome will support environmental sustainability and inclusive access. Providing extensive networks of safe walking and cycling facilities will encourage more people to use these healthy and sustainable travel options. Similarly, a focus on reducing deaths and serious injuries for vulnerable road users will also encourage more people to walk and cycle.

Making progress

Continuing to realise safety plans and supporting dramatic changes, or step changes, to encourage walking and cycling will help the urban areas of the region. New approaches to planning, design, and delivery, along with significant investment, are needed to accelerate progress.

Key actions over the next 10 years to make progress on this outcome are:

- continuing safety improvements targeting the urban areas of Whakatū Nelson and Waiharakeke Blenheim, high-risk intersections, run-off road crashes, high-volume roads, and head-on crashes on high-risk rural roads – this includes a critical focus on SH6 between Waiharakeke and Whakatū, and SH1 south of Waiharakeke
- rapidly rolling out a well-connected, separated cycling network through the reallocation of existing street space
- requiring high-quality active mode infrastructure to be part of new developments
- encouraging and implementing regulatory changes that reduce harmful vehicle emissions and encourage the use of zero-emissions vehicles
- continuing to manage transport system noise through planning and mitigation
- targeting road policing and behaviour change programmes with a focus on alcohol and drug impairment, speeding, and people not wearing seatbelts
- managing safe and appropriate speeds on high-risk rural roads – this includes targeted use of safety cameras to reduce speeding
- advocating for robust mobile network coverage in rural and regional areas.

> **Providing extensive networks of safe walking and cycling facilities will encourage more people to use these healthy and sustainable travel options.**

Inclusive access

Challenges and opportunities

The region's transport system struggles to provide people of all ages, abilities, and income levels with safe, sustainable, and reliable access to a wide variety of social and economic opportunities.

A high reliance on private vehicles outside of the urban area of Whakatū Nelson creates several access challenges, including:

- creating difficulties for those without easy access to, and use of, a private vehicle to fully participate in society
- placing significant pressure on household budgets to meet the high costs of car ownership and use
- limiting people's ability to travel in a way that best meets their needs because of poor travel choice.

Rural communities need access to key centres, such as Whakatū and Waiharakeke Blenheim, for education, employment, and essential services. As the population of Te Tauihu Top of the South ages, travel needs will change; there will be a greater need to access health services, and less need to access education and employment.

An ageing population means a wider range of accessible options are required, including:

- room for mobility scooters
- a wider range of walking and cycling facilities.

Emerging technologies, such as on-demand shuttles, could provide a shared-transport option. These would help people get around within smaller towns and rural communities, and improve access to services.

Improved access to high-quality data and information will allow better management of the transport system to get the most out of existing infrastructure.

Making progress

Improving inclusive access will often align with making progress on other outcomes, especially where travel choice is improved, and car dependency reduced. However, there may be challenging trade-offs to consider, such as balancing increased travel costs to reduce emissions while ensuring lower-income families aren't unfairly impacted.

Key actions over the next 10 years to make progress on this outcome are:

- shaping planning rules to enable and encourage more people to live in areas with better existing access to social and economic opportunities
- investing in public transport in the Whakatū Nelson urban area to improve services both within and between Whakatū and Waimea Richmond
- improving public transport services, and expanding on-demand services where appropriate
- exploring opportunities to improve the affordability of public transport for lower-income households
- expanding and improving walking and cycling facilities, so low cost, sustainable, healthy travel options are safe and attractive for more journeys
- ensuring transport infrastructure and services are designed and provided to meet the needs of people of all ages and abilities
- improving access to opportunities for iwi Māori, including access to sites of cultural significance
- exploring opportunities to support the mobile or digital delivery of essential services.

> **Rural communities need access to key centres, such as Whakatū Nelson and Waiharakeke Blenheim, for education, employment, and essential services.**

Economic prosperity

Challenges and opportunities

Over the next three decades, the transition to a low-emissions economy in line with the Climate Change Response (Zero Carbon) Amendment Act will mean significant change to the region's economy. Transport has a role to support this change. It must also be flexible to the evolving nature and direction of freight movement.

Freight movements will increase across the region following:

- development of the Waimea Community Dam
- the Picton Ferry Terminal upgrade with expanded dock facilities.

Reliable and resilient interregional connections to the North Island, through Cook Strait, and to the east and west coasts will continue to be important.

An ageing population and increasing number of residents on fixed incomes will likely make it harder to:

- maintain existing infrastructure
- fund new infrastructure
- provide appropriate services.

Technological change will have significant impacts on demand for travel and on the economy of Te Tauihu Top of the South. The COVID-19 pandemic accelerated working from home, while future developments, like artificial intelligence and automation, could have an impact on the type and location of work people do.

Transport planning will need to be flexible in response to these changes, recognising high levels of uncertainty around the nature and location of future jobs and the impact of this on travel patterns.

> **Reliable and resilient interregional connections to the North Island, through Cook Strait, and to the east and west coasts will continue to be important.**

Making progress

Economic productivity and business competitiveness in the region can be improved by a transport system that provides:

- a range of travel options with wide capacity
- reliable journey times
- safe and low-cost ways of getting around.

We will focus on progressing the Nelson Future Access Project through a detailed business case and supporting the Richmond Network Operating Framework.[19]

The Nelson Future Access Project will look at:

- the corridors of Rocks Road and Waimea Road
- access across all transport options to get people and freight in and out of Whakatū Nelson in a safe and efficient way.

The business case will also seek to better link the land transport network with Port Nelson, to ensure there are safe and accessible walking and cycling facilities, and consider public transport improvements.

The completion of the Ōpaoa River Bridge (SH1, Waiharakeke Blenheim) has provided better access for high productivity motor vehicles (HPMVs) travelling from Waitohi Picton to Ōtautahi Christchurch, as well as improved walking and cycling facilities.

Key actions over the next 10 years to make progress on this outcome are:

- improving access to social and economic opportunities, especially by walking and cycling, in Whakatū and other regional towns
- supporting resilient, reliable, and efficient freight and business travel around key parts of the network, especially around interregional connections, and to key freight and industrial hubs
- exploring opportunities to move to a more multimodal freight system with greater use of rail and coastal shipping
- managing increased transport costs in a way that doesn't negatively impact economic activity
- supporting the continued development of key economic centres by improving access and amenity (attractiveness)
- improving accessibility in local and town centres to allow these areas to flourish and better provide for the needs of residents
- considering further extension of the Whakatū cycleway network and completing a key link between Annesbrook and the beach at Tāhunanui.

Resilience and security

Challenges and opportunities

The next 30 years will see a growing risk of damage to road and rail networks because of increased rain and storm intensity, coastal and soil erosion, sea level rise, flooding, slips, and storm surges.[20]

Te Tai o Aorere Tasman, along with Waitaha Canterbury and Ōtākou Otago, has the highest estimated value of roading infrastructure that will be exposed to the risk of sea level rise.[21] Climate change will place even greater pressure on these areas' ability to maintain networks and fund new infrastructure and services.

Erosion is already a key risk along the Buller Gorge. Frequent rockfall on the SH6 stretch between intersections with SH65 and SH63 (Murchison to St Arnaud) are considered a high priority for the region. Seismic risk associated with the Alpine Fault is also significant across the South Island.

More than ever, there must be a greater focus on maintaining existing assets at current levels of access and connectivity. There is a major opportunity to progress multiple outcomes by investing in maintenance and renewals, but this requires changes to current practices and increased funding.

To be resilient, the region's transport system must be able to adapt to uncertainty and rapid change. For example, in recent years the popularity of e-bikes and then the need for social distancing during the COVID-19 pandemic highlighted:

- a need for more adaptable approaches to road space management
- unexpected benefits from past improvements to walking and cycling facilities.

Rapidly fluctuating fuel prices throughout 2022, caused by international events, also emphasised the need to reduce dependency on fossil fuel.

Making progress

For the transport system of Te Tauihu Top of the South, the key to resilience will be an ongoing focus on maintaining existing assets along with targeted improvements to reduce risks.

Key actions over the next 10 years to make progress on this outcome are:

- continuing design and planning work to identify and prioritise responses to natural hazards in high-risk areas – this includes working with communities to identify plans for when to defend, accommodate, or retreat
- continuing work to better understand routes that provide critical connections, the conditions of these, the pressures, and the level of investment needed to address impacts – this includes identifying priorities for network resilience
- engaging in local planning processes to avoid infrastructure and development in areas at risk of natural hazards and climate change, for example Atawhai, Tāhunanui Beach, Māpua, Tākaka, Tākaka Hill, Mārahau, Brooklyn, Riwaka, Motueka, Ruby Bay, and The Wood
- seeking continuous improvement in network resilience through maintenance, renewals, and 'low cost/low risk' investments
- improving operational responses to events to support quick recovery following disruption to the land transport system
- shifting to more adaptable 'scenarios-based' planning
- improving personal security for people using the region's transport system.

Te Tai o Aorere Tasman, along with Waitaha Canterbury and Ōtākou Otago, has the highest estimated value of roading infrastructure that will be exposed to the risk of sea level rise.

Te Tauihu – Top of the South: Focusing our efforts

For efficient and effective progress, transport challenges in Te Tauihu Top of the South must be tackled in a cohesive way. The directions below identify the most important issues to be resolved over the next 10 years to make progress towards transport outcomes.

- Apply a multi-outcome approach to the delivery of programmes and planning. This includes principles such as fairness, equity, safety, and light vehicle kilometre reduction.
- Begin to reduce vehicle kilometres travelled (VKT) in a way that's fair, equitable, and improves quality of life.
- Enable and support the region's transition to a low-carbon economy.
- Maintain and improve the resilience and efficiency of interregional connections to the North Island and to the west and east coasts.
- Improve access to social and economic opportunities, especially by public transport, walking, and cycling.
- Significantly reduce the harm caused by the region's transport system, especially through improved road safety and reduced pollutants that are dangerous to people's health.
- Actively support, enable, and encourage growth and development in areas that already have good travel choices and shorter average trip lengths.
- Rapidly accelerate the delivery of walking and cycling networks, predominantly through reshaping existing streets, to make these options safe and attractive.
- Explore the potential for new and emerging technologies, such as on-demand services, to improve access to social and economic opportunities.
- Better understand the impact of future economic transformation on travel patterns and freight volumes.
- Explore opportunities to move to a more multimodal freight system with greater use of rail and coastal shipping.
- Confirm how key resilience risks will be addressed over time, and work with communities to identify plans for when to defend, accommodate, or retreat.
- Continue to implement road safety plans and programmes including those focused for iwi Māori.
- Improve or maintain, as appropriate, physical access to marae, papakāinga, wāhi tapu, and wāhi taonga.

These will be updated over time to focus effort on the most critical matters.

References

1.	Statistics New Zealand (2021). Subnational population projections: 2018(base)–2048. **stats.govt.nz/information-releases/subnational-population-projections-2018base2048**

2.	Statistics New Zealand (2021). Subnational population projections: 2018(base)–2048. **stats.govt.nz/information-releases/subnational-population-projections-2018base2048**

3.	Statistics New Zealand (2021). Subnational population projections: 2018(base)–2048. **stats.govt.nz/information-releases/subnational-population-projections-2018base2048**

4.	Statistics New Zealand (2022). Subnational population projections, by age and sex, 2013(base)–2043 update. **stats.govt.nz/information-releases/subnational-population-projections-2018base2048**

5.	Statistics New Zealand (2021). Subnational population projections: 2018(base)–2048. **stats.govt.nz/information-releases/subnational-population-projections-2018base2048**

6.	Statistics New Zealand (2022). Subnational ethnic population projections: 2018(base)–2043. **stats.govt.nz/information-releases/subnational-ethnic-population-projections-2018base2043**

7.	Statistics New Zealand (2022). Subnational ethnic population projections: 2018(base)–2043. **stats.govt.nz/information-releases/subnational-ethnic-population-projections-2018base2043**

8.	Statistics New Zealand (2022). Subnational ethnic population projections: 2018(base)–2043. **stats.govt.nz/information-releases/subnational-ethnic-population-projections-2018base2043**

9.	Te Puni Kōkiri (2022). Find iwi by local authority. **tkm.govt.nz/browse**

10.	Reserve Bank of New Zealand (2018). Te Ōhanga Māori 2018. **rbnz.govt.nz/-/media/0212182a319f481ea4427bcf5dd703df.ashx**

11.	Reserve Bank of New Zealand (2018). Te Ōhanga Māori 2018. **rbnz.govt.nz/-/media/0212182a319f481ea4427bcf5dd703df.ashx**

12.	Ministry of Transport (2019). National freight demand study 2017/18. **transport.govt.nz/assets/Uploads/Report/NFDS3-Final-Report-Oct2019-Rev1.pdf**

13.	Ministry of Transport (2019). National freight demand study 2017/18. **transport.govt.nz/assets/Uploads/Report/NFDS3-Final-Report-Oct2019-Rev1.pdf**

14.	Ministry of Transport (2019). National freight demand study 2017/18. **transport.govt.nz/assets/Uploads/Report/NFDS3-Final-Report-Oct2019-Rev1.pdf**

15.	Ministry for the Environment (2022). Emissions reduction plan. **environment.govt.nz/what-government-is-doing/areas -of-work/climate-change/emissions-reduction-plan**

16.	Waka Kotahi NZ Transport Agency (2022). Crash analysis system. **nzta.govt.nz/safety/partners/crash-analysis-system**

17.	Ministry of Transport (2019). Road to zero – New Zealand's road safety strategy 2020–2030. **transport.govt.nz/assets/Uploads/Report/ Road-to-Zero-strategy_final.pdf**

18.	Waka Kotahi NZ Transport Agency (2022). Research report 696 health and air pollution in New Zealand 2016 (HAPINZ 3.0) He rangi hauora he iwi. **nzta.govt.nz/resources/research/reports/696/**

19.	Waka Kotahi NZ Transport Agency (2021). Nelson future access detailed business case. **nzta.govt.nz/assets/projects/nelson-future-access-project/nelson-future-access-project-detailed-business-case-summary-oct-2021.pdf**

20.	Ministry for the Environment (2018). Climate change projections for the Nelson-Tasman and Marlborough regions. **environment.govt.nz/facts-and-science/climate-change/impacts-of-climate-change-per-region**

21.	NIWA (2015). National and regional risk exposure in low-lying coastal areas. **https://ref.coastalrestorationtrust.org.nz/documents/national-and-regional-risk-exposure-in-low-lying-coastal-areas/**