

Arataki

Regional direction
Te Upoko o te Ika a Māui
- Greater Wellington
September 2023 v1.1

At a glance



Te Upoko o te Ika a Māui Greater Wellington is particularly vulnerable to seismic risk and other natural hazards. Sea level rise and more severe storms will increasingly impact on the region’s coastal communities, roads, and rail infrastructure.

Future growth must build on high levels of public transport use, walking, and cycling to:

- create stronger communities
- connect people to employment, education, and essential services
- support lower-income communities in Porirua and Te Awa Kairangi Hutt Valley.

Despite many people using public transport, the region still must reduce private vehicle use and encourage lower-emission transport options. Programmes like Let’s Get Wellington Moving (LGWM) will help with this shift.

Te Upoko o te Ika a Māui is the third largest regional economy in Aotearoa New Zealand. The region also has the highest median household income.¹ In the wider region though, there are still some areas of high deprivation.

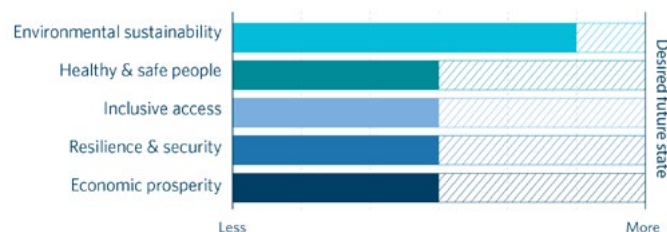
The population of Te Upoko o te Ika a Māui will grow from 525,900 to about 612,000 by 2048, or 10% of the country’s population.²

Te Upoko o te Ika a Māui relies heavily on two north-south corridors, for the movement of people and freight by road and rail. This shapes the region’s transport system. Current work is committed to addressing safety, resilience, and capacity issues.

Over 30% of all journeys to work are by public transport, walking, or cycling. Ongoing investment in safe and attractive facilities can help the region build on already high rates of walking and cycling. Active modes are the primary way to reduce vehicle kilometres travelled (VKT). Increasing the share of freight moved by rail and coastal shipping will also have an important role to play in reducing emissions.

Other critical transport challenges facing the region over the next three decades include safety, resilience, and supporting the transition to a low-carbon economy.

Scale of effort to deliver outcomes in Te Upoko o Te Ika a Māui - Greater Wellington



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 indicate where effort can be best focused and inform conversations with partners about priority outcomes in each region.

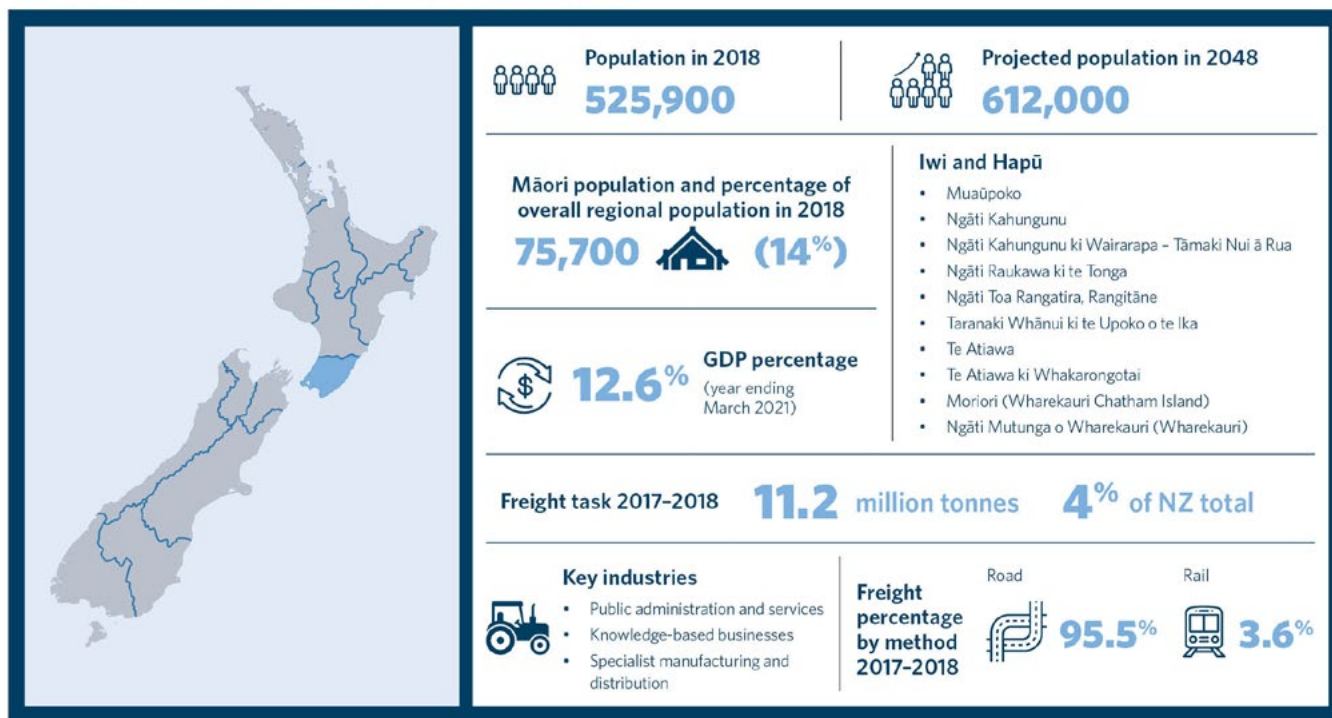
The rating assessments are based on evidence using system-levels metrics. Further details are captured in the methodology document.

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

Context



Te Upoko o te Ika a Māui – Greater Wellington



The population of Te Upoko o te Ika a Māui Greater Wellington will grow from 525,900 to 612,000 by 2048, or 10% of the country's population.³ People aged over 65 made up 13% of this. However, while Te Whanganui-a-Tara Wellington has a fairly young population, areas like the Wairarapa and Kāpiti Coast have populations older than the national average.⁴

Recent growth has placed pressure on housing supply and rental affordability. In the future, the focus will need to be on concentration in existing urban centres where there will be high-frequency bus routes and Let's Get Wellington Moving's future mass rapid transit.

Immigration will be the most important factor in population growth, because of the country's ageing population and the narrowing gap between the number of births and deaths.⁵

Te Upoko o te Ika a Māui relies heavily on two north-south road and rail corridors for the movement of people and freight – one east to Horowhenua and the other west to the Wairarapa. Current work is underway to address safety, resilience, and capacity issues.

Te Aranui o Te Rangihaeata Transmission Gully section of SH1, opened March 2022, provides increased capacity and resilience along the northern corridor.

Te Upoko o te Ika a Māui is the northern port for road and rail trips between the North and South Islands, by the Cook Strait ferries. Access to CentrePort, and the safety and reliability of road and rail corridors north of Te Upoko o te Ika a Māui, are critical to supporting these journeys.

Wellington International Airport is the third busiest airport in Aotearoa New Zealand. It is a significant transport hub for many domestic flights, as well as international services.

In 2018, 75,700 Māori lived in Te Upoko o te Ika a Māui, making up 14% of the region's population; this is lower than the national rate of 16.5%⁶. Most Māori live in Te Awa Kairangi ki Tai Lower Hutt, where they make up 18% of the city's population.⁷

The iwi and hapū in Te Upoko o te Ika a Māui are Muaūpoko, Ngāti Kahungunu, Ngāti Kahungunu ki Wairarapa - Tāmaki Nui ā Rua, Ngāti Raukawa ki te Tonga, Ngāti Toa Rangatira, Rangitāne, Taranaki Whānui ki te Upoko o te Ika, Te Ātiawa, and Te Ātiawa ki Whakarongotai.⁸ Iwi in the Chatham Islands include Moriori and Ngāti Mutunga o Wharekauri.⁹

Te Ōhanga Māori - The Māori Economy 2018 includes information for the Te Whanganui-a-Tara and Kurahaupō rohe, which relates to the Te Upoko o te Ika a Māui region. It notes the asset base in these rohe is valued at \$5.4 billion.¹⁰ Property is important, followed by public and professional services.¹¹

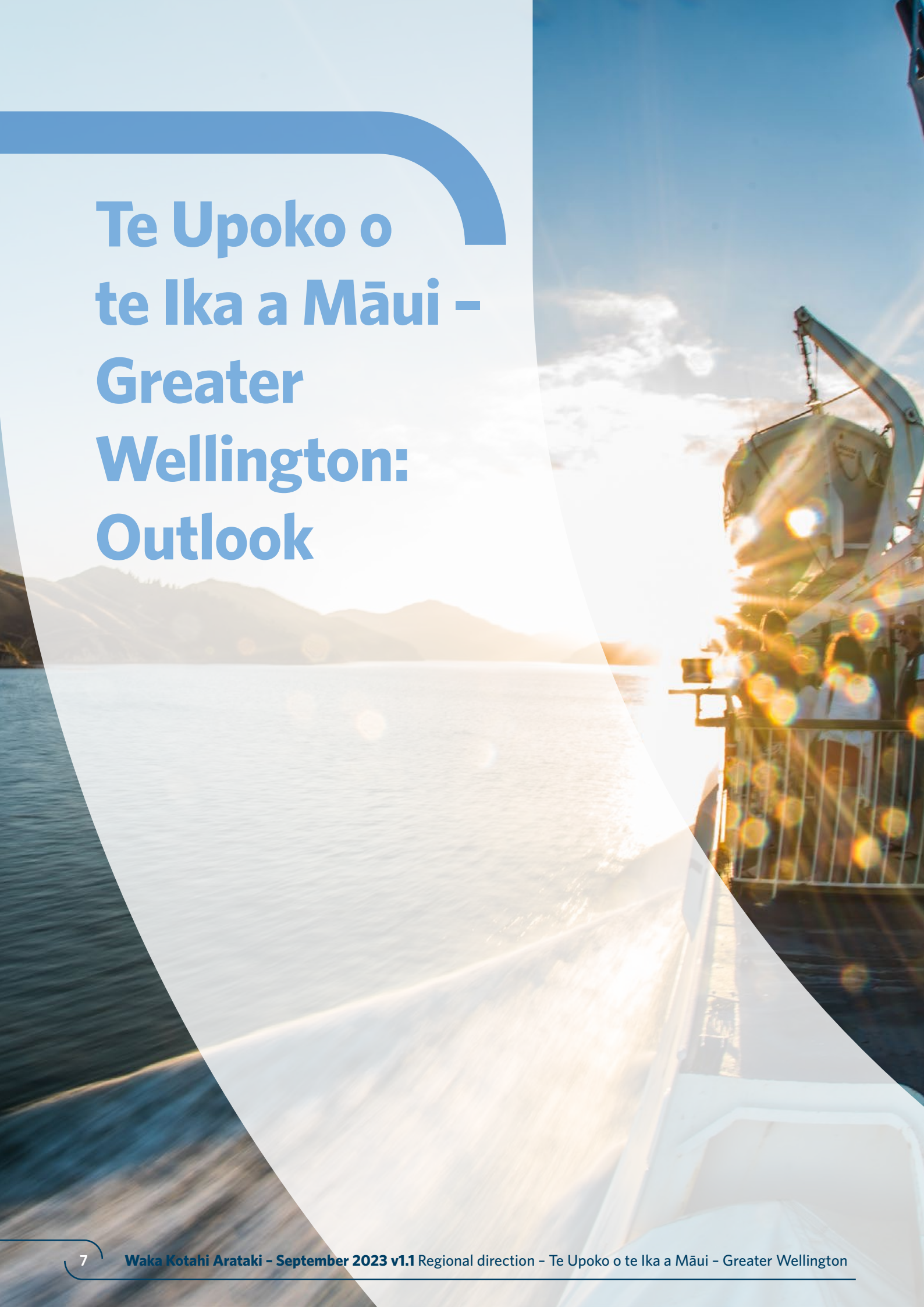
As home to our capital city, the regional economy is dominated by public administration and services, knowledge-based businesses, with a smaller amount (15%) of specialist manufacturing and distribution. Forty percent of the region's jobs are in the central business district of Te Whanganui-a-Tara.

With the third largest regional economy in Aotearoa, Te Upoko o te Ika a Māui also has the highest median household income.¹² Despite this, the wider region has areas of high deprivation, such as Cannons Creek in Pari-ā-Rua Porirua and Taitā in Te Awa Kairangi ki Tai. Unemployment rates in these areas are higher than the national average.¹³

The freight task in the region in 2017-2018 was 11.2 million tonnes, or around 4% of the Aotearoa total.¹⁴ A total of 95.5% of the freight task tonnage in the region was moved by road and 3.6% by rail.¹⁵

Primary sector commodities produced in Te Upoko o te Ika a Māui, representing 5% of the Aotearoa total in 2017-2018, are:

- Concrete - 710,000 tonnes, or 7.2% of the country's ready-mix concrete production.¹⁶
- Wool - 7,699 tonnes, or 5.5% of the country's wool production.¹⁷

The background of the cover is a photograph of a boat's deck at sunset. The sun is low on the horizon, creating a bright, golden glow over the water and the sky. The boat's railing and a crane-like structure are visible on the right side. The overall mood is serene and scenic.

Te Upoko o te Ika a Māui - Greater Wellington: Outlook

Te Upoko o te Ika a Māui Greater Wellington is the political hub of Aotearoa New Zealand.

The region's constrained topography means there are limited transport corridors creating a fragile transport network prone to disruption. The transport system needs to be safer, reduce carbon emissions, and support new ways of moving for future generations.

Population growth is putting pressure on the transport system, along with the need for housing. *The Wellington Regional Growth Framework (WRGF)* is a spatial plan that guides how the region should grow.¹⁸ It provides councils and iwi with an agreed regional direction for growth and investment. The plan addresses challenges such as:

- providing increased housing supply
- transitioning to a low carbon future
- improving resilience and multimodal access.

Implementation of the WRGF with our partners in the Wellington Regional Leadership Committee is a key focus. (Further discussion of the WRGF is in the Urban Wellington focus section).

The Let's Get Wellington Moving (LGWM) programme seeks to deliver a transport system with multiple ways to move more people, goods, and services reliably using fewer vehicles. While mass transit is a core element of the programme, there is also a focus on road space reallocation to support public transport, walking, and cycling to make the city a better place to live. Outcomes from this work, together with ongoing discussions about future port developments and light rail, will shape the region's future transport system.

Public services will continue to be a significant employment sector in the region. Service industries and health are expected to grow from 2025 to 2030. The further decline of manufacturing and wholesale trade may impact on employment opportunities in Pari-ā-Rua Porirua and Te Awa Kairangi Hutt Valley; this contributes to already high levels of deprivation in these local communities.

Te Whanganui-a-Tara Wellington is a major tourist destination, with one third of tourism income coming from international visitors. While international visitor numbers have dropped sharply and are forecast to remain below pre-COVID-19 levels for the foreseeable future, the impact on the economy of Te Whanganui-a-Tara has been offset by a rise in domestic tourism since 2020.¹⁹

The region will continue to play an important role in moving freight and people between the North and South Islands. Lowering freight transport emissions will also drive change in the transport system, by using lower-emitting fuels and increasing mode share for rail and coastal shipping

The *Emissions Reduction Plan* sets vehicle kilometres travelled (VKT) reduction targets for light vehicles.²⁰ As a main urban centre, Te Whanganui-a-Tara will require an increasing focus on:

- integrating land-use and transport to support mode shift
- reducing emissions.

During the next three decades, climate change will be one of the most significant drivers influencing the land transport system. Impacts, such as flooding, are expected in the low-lying areas of Te Awa Kairangi ki Tai Lower Hutt, Pito-one Petone, Te Awa-a-Tāia Kilbirnie, and the city centre of Te Whanganui-a-Tara.

The region will need to find ways to fund new infrastructure and services to keep pace with expected growth in Te Whanganui-a-Tara. High seismic risks also present funding challenges for some councils. Climate change will make this even harder and put pressure on the region's ability to maintain existing networks.



Population growth is putting pressure on the transport system, along with the need for housing.

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 Upoko o te Ika a Māui Greater Wellington has the fourth highest carbon emissions in Aotearoa New Zealand.²¹ This is despite the region having the highest public transport usage in Aotearoa, with over 30% of journeys to work by public transport, walking, or cycling.²² Customer satisfaction levels with public transport are relatively low because of capacity and reliability issues.

Te Upoko o te Ika a Māui will need to make an important contribution to reducing transport emissions, to reach the 2035 targets set in the government’s *Emissions Reduction Plan* and net-zero emissions by 2050.²³ This includes a target to reduce total vehicle kilometres travelled (VKT) by our light vehicle fleet by 20% by 2035.

As the main urban centre, Te Upoko o te Ika a Māui presents the greatest opportunity to support national emissions reductions by providing alternative transport options and reducing the need to travel. This will require significant change to how people travel in a district focused on private car usage. Improving transport options and reducing traffic are not just important for meeting our climate commitments. They are vital for reducing congestion and making our transport system more safe, healthy, and inclusive for people of all ages and abilities.

Care is required to ensure efforts to reduce VKT don’t unfairly impact specific communities or groups.

The delivery of Let’s Get Wellington Moving (LGWM) is expected to make a significant contribution to emissions reduction through:

- reduced VKT
- greater use of public transport
- higher density land use along the main transit corridors.

During the next decade, technological changes like mobility as a service, on-demand travel, and intelligent systems will:

- offer new travel choices
- reduce carbon emissions
- lessen reliance on private transport
- improve network management.

There will be increased demand to plan, book, and pay digitally for journeys. The growing popularity of online purchasing and home delivery will impact on-demand travel, including the movement of freight.

We need to reduce freight transport carbon through:

- using 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.

There will be increased demand to plan, book, and pay digitally for journeys. The growing popularity of online purchasing and home delivery will impact on-demand travel.

Making progress

As a main urban centre, Te Upoko o te Ika a Māui Greater Wellington will need to do much of the heavy lifting for the region to contribute towards national vehicle kilometres travelled (VKT) reduction. This work will inform future planning and investment decision-making.

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

- encouraging growth and urban development that supports compact, mixed-use urban form to reduce trip length and car dependency
- focusing new housing in areas that don't need new infrastructure, through the *Wellington Regional Growth Framework* (WRGF)
- planning what interventions, activities, and investments are needed to achieve VKT and emissions reduction
- changing the allocation of space on existing roads and streets to allow and increase mode shift to public transport, walking, and cycling
- improving public transport service quality and reliability
- exploring opportunities to use technology to deliver better public transport services at a lower cost
- influencing growth through the WRGF to make future greenfield development (development of undeveloped areas) is integrated with public transport and active mode networks to create medium-density residential areas
- working with Kāinga Ora on proposals for the Specified Development Project in the Northern Growth Area to make sure development helps to reduce VKT, and supports public transport and active modes
- shifting more people from private vehicles to lower-emission travel options through the delivery of the LGWM programme
- getting more from the region's existing transport system, by making the most of existing networks, services, and demand management
- delivering the urban cycleway programme across the region
- working with councils to manage car parking in the city centre, city fringe area, and other key centres to increase use of public transport, walking and cycling.

Healthy and safe people

Challenges and opportunities

A focus on safety is needed throughout Te Upoko o te Ika a Māui Greater Wellington. Efforts should address:

- high-risk motorcycle routes
- speed on rural roads
- harm to vulnerable users, such as cyclists and pedestrians, in the urban areas of Te Whanganui-a-Tara Wellington.²⁴

Efforts to improve road safety are guided by the *Road to Zero: New Zealand's Road Safety Strategy 2020–2030*, associated *Action Plan 2020–2022*, plus regional safety strategies.²⁵

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

- encourage more people to travel by active modes
- deliver important health, access, and sustainability benefits.

Making progress

Continuing to realise safety plans and supporting dramatic changes to encourage walking and cycling will help the urban areas of Te Upoko o te Ika a Māui Greater Wellington. 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 interventions that target high-risk intersections and high-risk, large-volume urban roads
- rapidly rolling out a well-connected, separated cycling network, largely 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 use of zero-emissions vehicles
- continuing to manage transport system noise through planning and mitigation
- 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.

Continuing to realise safety plans and supporting dramatic changes to encourage walking and cycling will help the urban areas of Te Upoko o te Ika a Māui.

Inclusive access

Challenges and opportunities

Lower socio-economic communities in Pari-ā-Rua Porirua and Te Awa Kairangi ki Tai Lower Hutt have high levels of deprivation and unemployment rates that are above the national average.²⁶ These areas need well-planned land-use and transport changes to improve access to education, employment, and essential services.

Emerging technologies, such as on-demand shuttles, could provide a shared-transport option. These shuttles could help people get around urban areas, smaller towns, and rural communities.

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 over time, 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 and urban development decision-making to encourage people to live in areas with better access to social and economic opportunities
- improving public transport services, including on-demand services where appropriate
- exploring opportunities to improve public transport affordability
- expanding and improving walking and cycling facilities, so these 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
- supporting mobile or digital delivery of essential services.



Emerging technologies, such as on-demand shuttles, could provide a shared-transport option. These shuttles could help people get around urban areas, smaller towns, and rural communities.

Economic prosperity

Challenges and opportunities

The *Wellington Regional Growth Framework* provides a 30-year plan to identify development opportunities and transport investment priorities for Te Upoko o te Ika a Māui Greater Wellington, including Horowhenua.²⁷ It has been developed in partnership with central government, local government, and iwi.

In addition, several of the larger councils have already completed, or are developing, growth strategies for their districts, for example Pari-ā-Rua Porirua and Te Whanganui-a-Tara Wellington. Regeneration in the eastern parts of Pari-ā-Rua offers an opportunity to improve the urban design and transport system to achieve a range of outcomes, improve travel options, and boost the local community.

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. Reliable and resilient interregional connections to the north and to the South Island, through Cook Strait, will continue to be important.

Technological change will have significant impacts on demand for travel and on the economy of Te Upoko o te Ika a Māui. 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 and to the South Island, through Cook Strait, will continue to be important.

Making progress

Economic productivity and business competitiveness in Te Upoko o te Ika a Māui Greater Wellington 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.

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

- supporting the iRex Project to improve the journey between Te Whanganui-a-Tara Wellington and Waitohi Picton, through Cook Strait
- supporting the Let's Get Wellington Moving (LGWM) joint initiative between Te Kaunihera o Pōneke Wellington City Council, Te Pane Matua Taiao Greater Wellington Regional Council, and Waka Kotahi
- working with Kāinga Ora on the Pari-ā-Rua Northern Growth Area (NGA) potential Specified Developmental Project (SDP) to support local economic growth through access improvements for deprived communities
- making sure the transport system is maintained to an appropriate level of service with minimal disruptions
- improving access to social and economic opportunities, especially by walking and cycling
- supporting resilient, reliable, and efficient freight and business travel around key parts of the network, especially around interregional connections and 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 development of key economic centres by improving access and convenience while reducing carbon emissions and vehicle kilometres travelled.²⁸

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.²⁹ Impacts of climate change, such as flooding, are expected to impact the low-lying areas of Te Awa Kairangi ki Tai Lower Hutt, Pito-one Petone, Te Awa-a-Tāia Kilbirnie, and Te Whanganui-a-Tara Wellington.

Te Upoko o te Ika a Māui Greater Wellington has significant seismic risks made worse by the reliance on a limited number of key road and rail corridors to connect communities and key destinations.

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 adapt to uncertainty and rapid change. For example, in recent years the popularity of e-scooters 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.

More than ever, there must be a greater focus on maintaining existing assets at current levels of access and connectivity.

Making progress

To improve resilience in Te Upoko o te Ika a Māui Greater Wellington, the transport system needs an ongoing focus on maintaining existing assets along with targeted improvements to reduce risks. We also need to expand our understanding of resilience in a highly complex urban environment, to ensure planning work is flexible and adaptable to change.

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
- understanding routes that provide critical connections, the condition of these, the pressures, and the level of investment needed to address impacts – this includes assessments to identify priorities for network resilience
- supporting the Wellington Lifelines Regional Resilience Project to improve community resilience such as critical transport and lifeline infrastructure
- engaging in local planning processes to avoid infrastructure and development in areas at increased risk of natural hazards and climate change
- 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.

Urban Wellington focus

A growing city and national capital

For the purposes of *Arataki*, 'urban Wellington' is defined using the Wellington Regional Growth Framework (WRGF); this includes the eight councils of the region, plus southern Horowhenua including Taitoko Levin.³⁰

The urban areas of Te Upoko o te Ika a Māui Greater Wellington are projected to grow by about 86,000 people (16%) by 2048.³¹ The WRGF outlines how the region can accommodate an additional 200,000 people and 100,000 jobs in the next 30 years.

Public administration and services, and knowledge-based businesses dominate the economy. Te Whanganui-a-Tara Wellington city centre will continue to be the region's primary employment centre. Increasing employment is expected in Pari-ā-Rua Porirua, Te Awa Kairangi ki Tai Lower Hutt, Te Awa Kairangi ki Uta Upper Hutt, Paraparaumu, Taitoko, Whakaoriori Masterton, and other smaller local centres. This will increase urban vibrancy, improve equity and access to opportunities, and reduce long distance private vehicle trips.

The geographic layout and urban form of Te Upoko o te Ika a Māui creates a unique set of transport challenges and opportunities. A high reliance on two north-south road and rail corridors creates several capacity and resilience challenges. It concentrates travel demand in corridors well served by public transport. However, new growth will increasingly happen at the edges of the urban area, which is a long distance from employment, social, and economic opportunities. Similarly, the high concentration of jobs and economic activity in central Te Whanganui-a-Tara Wellington, and the highly constrained nature of the city centre's transport system, creates conflicts between travel choice and goals for the central area. It also plays a major role in Te Whanganui-a-Tara as the country's least car dependent city, with 30% of all journeys to work made by public transport, walking, or cycling.

The Wellington Regional Growth Framework

The Wellington Regional Growth Framework (WRGF), developed in 2019–2020 by central and local government and iwi, provides a 30-year plan about development opportunities and transport investment priorities for Te Upoko o te Ika a Māui Greater Wellington, including Horowhenua.


The WRGF allows a range of future growth paths that could have different transport and emission outcomes. A high degree of regional coordination and cooperation is needed to direct growth to areas for better outcomes, including limiting growth in undesirable locations.

The WRGF aims for concentration within existing urban centres, with a focus on:

- high-quality rapid transit (rail)
- high-frequency bus routes
- future mass rapid transit (delivered through Let's Get Wellington Moving LGWM).

The WFGF plan estimates that about 25% of growth will be in Te Upoko o te Ika a Māui, one-third along the eastern corridor from Te Awa Kairangi ki Tai Lower Hutt to Whakaoriori Masterton, and the remainder in the western corridor from Tawa to Taitoko Levin. Growth scenarios developed by LGWM highlight significant benefits from a greater proportion of growth occurring in Te Whanganui-a-Tara, especially in the future rapid transit corridor from the city centre to Taputeranga Island Bay.

To realise the WRGF and National Policy Statement on Urban Development (NPS-UD), individual councils are planning urban growth and considering the nature of concentration along rapid transit corridors and potential greenfield sites (development of undeveloped areas).³²



The urban areas of Te Upoko o te Ika a Māui are projected to grow by about 86,000 people (16%) by 2048.

Let's Get Wellington Moving (LGWM)

LGWM is a partnership between Waka Kotahi, Te Pane Matua Taiao Greater Wellington Regional Council, and Te Kaunihera o Pōneke Wellington City Council. In recent years, LGWM has looked at how to improve the transport system between Ngauranga Gorge and Wellington International Airport. LGWM aims to provide better travel choices to help reduce carbon emissions, by making Te Upoko o te Ika a Māui Greater Wellington more compact and sustainable through moving more people in fewer vehicles.

The LGWM programme includes:

- better walking facilities
- connected cycleways
- high-quality mass rapid transit
- more reliable buses
- improvements at the Basin Reserve
- a second Mount Victoria Tunnel.

These improvements go hand-in-hand with planning and urban development changes. LGWM is a large and complex plan with three broad phases:

1. A short-term, three-year programme.
2. A city-streets package that focuses on improving safety and getting more out of existing streets.
3. A long-term programme involving significant investments in rapid transit and the addressing key bottlenecks at Basin Reserve and Mount Victoria.

Key challenges

Climate change and transport resilience

A well-developed rail system and completion of large sections of the Wellington Northern Corridor project mean large parts of urban Wellington are well served by strategic transport networks. However, significant investment is needed over time to address maintenance and capacity issues with the rail network. Key safety and resilience issues remain, such as undeveloped active travel networks and high reliance on a small number of transport corridors with few alternative routes. These vulnerabilities, alongside the region's high seismic risk and more extreme weather events, means transport system resilience is an ongoing challenge.

Climate change

Larger urban areas, like Te Whanganui-a-Tara Wellington, provide the greatest opportunity to reduce transport emissions. Reducing traffic will also mean:

- significant health and safety benefits
- less congestion
- better places to live.

These benefits will be particularly significant in urban Wellington, given its highly constrained form.

The region's urban form and well-developed public transport networks mean it's well-placed to lead the way and demonstrate how emissions reduction can be achieved.

A wider variety of available actions are needed to reduce traffic volumes in Te Whanganui-a-Tara, including:

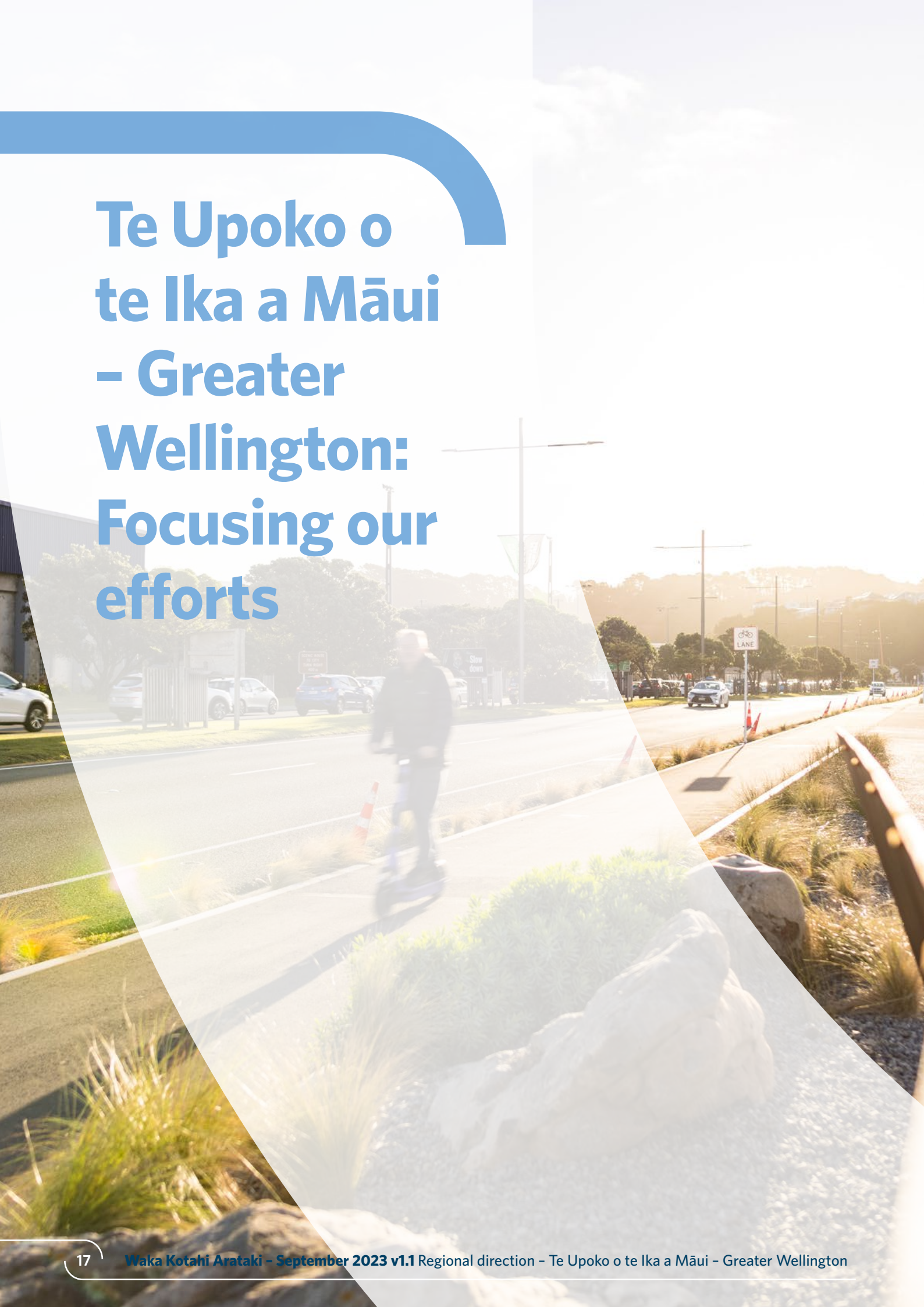
- improving urban form
- offering better transport options
- managing demand for travel by cars.

Planning to reduce vehicle kilometres travelled will confirm what actions and at what scale is needed to meet emissions reduction goals. Waka Kotahi will partner with local government, iwi, and community representatives to develop this work.

Housing and urban development

In recent years, housing supply across urban Wellington has not kept up with population growth and has led to rising costs. Over the next 30 years, the city must focus on increasing housing supply and improving housing affordability in a way that also contributes to other key outcomes, like emission reduction.

Decisions need to be made about how the region will grow, especially along the planned rapid transit corridor that forms part of LGWM. LGWM confirmed the potential benefits of a more compact urban form with a greater share of growth in this corridor. Significant and proactive effort is needed to realise this.



Te Upoko o te Ika a Māui - Greater Wellington: Focusing our efforts

The transport challenges for Te Upoko o te Ika a Māui Greater Wellington need to be tackled in a cohesive way for efficient and effective progress. The directions below identify the most important issues to be resolved over the next 10 years to make progress towards transport outcomes.

- Reduce vehicle kilometres travelled (VKT), focusing on Te Whanganui-a-Tara Wellington, 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 road and rail connections, especially north to the rest of the North Island and passenger/freight ferry connections to the South Island.
- Improve access to social and economic opportunities, especially by public transport, walking, and cycling.
- Significantly reduce harm caused by the region's transport system, especially through improved road safety and reduced pollutants dangerous to health.
- Actively support, enable, and encourage growth and development in areas that have good travel choices and shorter trip lengths.
- Rapidly accelerate delivery of walking and cycling networks, predominantly through reshaping existing streets, to make these options safe and attractive.
- Explore new and emerging technologies, such as on-demand services, to improve access to social and economic opportunities, especially in areas with fewer sustainable transport choices.
- Better understand the impact of future economic transformation on travel patterns and freight volumes.
- Explore moving to a more multimodal freight system with greater use of rail.
- Confirm how resilience risks will be addressed over time, and work with communities to plan 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). Household income and housing-cost statistics: Year ended June 2020 – corrected. stats.govt.nz/information-releases/household-income-and-housing-cost-statistics-year-ended-june-2020
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 (2019). 2018 Census population and dwelling counts. stats.govt.nz/information-releases/2018-census-population-and-dwelling-counts
5. Statistics New Zealand (2021). Subnational population projections: 2018(base)-2048. <https://www.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. Te Puni Kōkiri (2022). Find iwi by local authority. www.tkm.govt.nz/browse/
9. Te Puni Kōkiri (2022). Find iwi by local authority. www.tkm.govt.nz/browse/
10. Reserve Bank of New Zealand (2018). Te Ōhanga Māori 2018. www.rbnz.govt.nz/-/media/0212182a319f481ea4427bcf5dd703df.ashx
11. Reserve Bank of New Zealand (2018). Te Ōhanga Māori 2018. www.rbnz.govt.nz/-/media/0212182a319f481ea4427bcf5dd703df.ashx
12. Ministry of Business, Innovation and Employment (2019). MBIE household income estimates. Regional economic activity web tool: Median household income in New Zealand. webrear.mbie.govt.nz/theme/household-income-median/map/timeseries/2018/newzealand?right-transform=absolute
13. The University of Auckland (2018). New Zealand index of multiple deprivation (IMD). <https://hgd.auckland.ac.nz/imd18/>
14. Ministry of Transport (2019). National freight demand study 2017/18. www.transport.govt.nz/assets/Uploads/Report/NFDS3-Final-Report-Oct2019-Rev1.pdf
15. Ministry of Transport (2019). National freight demand study 2017/18. www.transport.govt.nz/assets/Uploads/Report/NFDS3-Final-Report-Oct2019-Rev1.pdf
16. Ministry of Transport (2019). National freight demand study 2017/18. www.transport.govt.nz/assets/Uploads/Report/NFDS3-Final-Report-Oct2019-Rev1.pdf
17. Ministry of Transport (2019). National freight demand study 2017/18. www.transport.govt.nz/assets/Uploads/Report/NFDS3-Final-Report-Oct2019-Rev1.pdf
18. Wellington Regional Growth Framework (2022). Wellington regional growth framework. wrgf.co.nz
19. Ministry of Business, Innovation and Employment (2020). Annual tourism spend grouped by TA, region, country of origin and product category. www.mbie.govt.nz/immigration-and-tourism/tourism-research-and-data/tourism-data-releases/monthly-regional-tourism-estimates/latest-update/annual-tourism-spend-grouped-by-ta-region-country-of-origin-and-product-category
20. Ministry for the Environment (2022). Emissions reduction plan. environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/emissions-reduction-plan
21. Waka Kotahi NZ Transport Agency (2022). Vehicle emissions mapping tool. nzta.govt.nz/roads-and-rail/highways-information-portal/technical-disciplines/air-quality-climate/planning-and-assessment/vehicle-emissions-mapping-tool
22. Ministry of Transport (2019). Household travel survey. www.transport.govt.nz/area-of-interest/public-transport/new-zealand-household-travel-survey/
23. Ministry for the Environment (2022). Emissions reduction plan. environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/emissions-reduction-plan
24. Waka Kotahi NZ Transport Agency (2022). Crash analysis system. nzta.govt.nz/safety/partners/crash-analysis-system
25. Ministry of Transport (2019). Road to zero – New Zealand’s road safety strategy 2020–2030. www.transport.govt.nz/assets/Uploads/Report/Road-to-Zero-strategy_final.pdf

26. Statistics New Zealand (2019). 2018 Census population and dwelling counts. stats.govt.nz/information-releases/2018-census-population-and-dwelling-counts
27. Wellington Regional Growth Framework (2022). Wellington regional growth framework. wrgf.co.nz
28. Let's Get Wellington Moving (2022). Golden Mile revitalisation. lgwm.nz/all-projects/golden-mile-improvements/?gclid=EAlaIqobChMlv-n95vma-QIVWJImAh13bwF-EAAYASAAEgLMvFD_BwE
29. Ministry for the Environment (2018). Climate change projections for the Wellington and Wairarapa region. environment.govt.nz/facts-and-science/climate-change/impacts-of-climate-change-per-region/projections-wellington-wairarapa-region
30. Wellington Regional Growth Framework (2022). Wellington regional growth framework. wrgf.co.nz
31. Statistics New Zealand (2021). Subnational population projections: 2018(base)-2048. stats.govt.nz/information-releases/subnational-population-projections-2018base2048
32. Ministry of Housing and Urban Development (2021). National policy statement on urban development. www.hud.govt.nz/urban-development/national-policy-statement-on-urban-development/